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ABSTRACT

A study examined the use of educational aid provided by employers to employees, including the types of employees and educational and training programs that employers support. Two National Center for Education Statistics data sets provided the data for the analysis: National Household Education Survey, which provides information describing all educational activities of adults, and National Postsecondary Student Aid Survey, which provides detailed information about how employers help students pay for postsecondary education. Some of the findings were the following: (1) 13 percent of adults participated in credential programs in 1995, compared with about 20 percent who participated in work-related or other structured programs; (2) 72 percent of adults employed as engineers, surveyors, or architects who enrolled in credential programs received financial assistance from their employers, compared with 50 percent of employees who were executives, administrators, and managers, 10 percent of employees who were marketing and sales workers, and 4 percent who were low-skilled manual laborers; (3) adults who worked part time were less likely to receive employer financial aid if they enrolled in credential programs (7 percent) than those who worked full time (37 percent); (4) 6 percent of all undergraduates received financial aid from their employers, averaging $932, and 13 percent of graduate and first-professional students received employer assistance averaging $2,451; and (5) male graduate students received approximately one-third more employer financial aid than female students. (The report includes 16 tables and 7 figures, a glossary, and technical notes.) (KC)

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NATIONAL CENTER FOR EDUCATION STATISTICS

Statistical Analysis Report June 1999

Postsecondary Education Descriptive Analysis Reports

Employer Aid for Postsecondary Education

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Statistical Analysis Report June 1999

Postsecondary Education Descriptive Analysis Reports

Employer Aid for Postsecondary Education

John B. Lee
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U.S. Department of Education
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FOREWORD

This report examines the utilization of employer aid. This includes the description of the types of employees and educational and training programs that employers support.

The report uses data from two sources: the 1995-96 National Postsecondary Student Aid Study (NPSAS:96) and the Adult Education component of the 1995 National Household Education Survey (NHES:95). NPSAS:96 is the fourth in a series of surveys conducted by the U.S. Department of Education. NPSAS:96 represents students of all ages and backgrounds at all types of accredited postsecondary institutions (from less-than-2-year institutions that provide short-term vocational training to 4-year colleges and universities) during the 1995-96 academic year. NHES:95 is a random telephone survey of households. For the Adult Education component, up to two adults in each household reported their adult education activities. Among these activities were enrollment in credential, adult basic skills, work-related and other structured training or educational programs such as recreation or self-improvement activities.

The percentages and means presented in this report were produced using the NPSAS:96 and NHES:95 Data Analysis Systems (DAS). The DAS is a microcomputer application that allows users to specify and generate their own tables from the NPSAS and NHES datasets. It produces the design-adjusted standard errors that are necessary for testing the statistical significance of differences shown in the tables. For more information about the DAS and directions for obtaining access through the Internet, see appendix B.

ACKNOWLEDGMENTS

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HIGHLIGHTS

Two National Center for Education Statistics (NCES) data sets provided the data for this report: National Household Education Survey (NHES) and National Postsecondary Student Aid Survey (NPSAS). NHES provides information describing all educational activities of adults, and NPSAS provides detailed information about how employers help students pay for their education if they attended a postsecondary institution.

According to NHES, 13 percent of adults participated in credential programs in 1995. That was less than either the 21 percent of adults who participated in work-related programs or the 20 percent who participated in other structured programs. Forty-one percent of the adults in credential programs were seeking bachelor's degrees. Another 19 percent were seeking associate's degrees. In some cases, a credential program may include professional certification.

One-half of adults who were executives, administrators and managers who enrolled in credential programs received financial assistance from their employers. This compared with 10 percent of the employees who were in marketing and sales, and 4 percent of those who were handlers, cleaners, helpers, or laborers.

Seventy-two percent of adults employed as engineers, surveyors, or architects who enrolled in credential programs received cash assistance from their employers. That was more than those who were: social scientists or lawyers; teachers, except for postsecondary; writers, artists, entertainers or athletes; health technologists; in marketing and sales; administrative support; service; construction; production; transportation and material moving; or handlers, cleaners, helpers and laborers.

Adults who worked part-time were less likely to receive employer financial aid if they enrolled in credential programs than those who worked full-time. Seven percent of adults who worked part-time received cash assistance from their employers if they took credential programs compared with 37 percent of those who worked full-time.

NPSAS data indicate that 6 percent of all undergraduates received financial aid from their employer. Four percent of the undergraduates who perceived themselves as students who

worked received employer financial aid compared with 25 percent of those who defined themselves as undergraduate employees. The following findings are limited to those undergraduate employees who enrolled.

The control of the institution was related to the probability of receiving employer financial aid. Forty-six percent of the undergraduate employees (employed undergraduates who considered themselves primarily employees rather than students) who attended private, not-for-profit institutions received employer financial aid compared with 23 percent of those who attended public institutions.

The level of program in which students were enrolled also related to the probability of receiving employer financial aid. Thirty-four percent of the undergraduate employees who were enrolled in bachelor's degree programs received employer financial aid compared with 23 percent of those enrolled in institutions that offered associate's degrees, and 18 percent of those enrolled in certificate programs. Undergraduate employees who enrolled in business programs were more likely to receive employer financial aid than were those in humanities, social and behavioral sciences, education, and life sciences.

The average employer financial aid amount awarded to undergraduate employees was $932, and ranged from $432 for those attending institutions with tuition and fees below $1,000 to $3,437 for those attending institutions with tuition and fees between $5,000 and $7,499. Employer financial aid recipients in public institutions received $510 compared with $2,321 received by those in private, not-for-profit institutions.

Thirteen percent of graduate and first-professional students (this category includes medical doctors, lawyers, and architects) received employer financial aid. Master's degree students were more likely to receive employer financial aid than were doctoral or first-professional students. Sixteen percent of master's degree students received employer financial aid compared with 5 percent of the doctoral and first-professional students.

The average employer financial aid amount awarded to graduate students was $2,451. Male recipients received a higher average amount of employer financial aid than females. Males received an average employer financial aid award of $2,987 compared with $1,980 received by females.

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INTRODUCTION

Employers are interested in helping their employees continue their education. According to the National University Continuing Education Association (NUCEA), 90 percent of companies currently offer continuing education benefits and 97 percent plan to offer them by the year 2000.[1] Another survey found that 75 percent of the surveyed employers provided tuition benefits.[2] NUCEA reports that the benefit ranks above childcare, flextime and family leave benefits in popularity with employees.

Three explanations suggest why employers are willing to invest in their employees' education. First, if the average age of the workforce continues to increase as the baby boom generation passes age 40,[3] it would be appropriate to maintain and upgrade the skills of an older workforce. Second, education is essential to worker productivity and America's continuing competitiveness in the global economy. Economic research has confirmed that there is a link between education and worker productivity.[4] Third, the number of jobs that demand special skills and higher educational preparation is increasing faster than those that require no special training.[5]

Employers have some incentive to compensate employees for tuition benefits because the support is usually exempt from federal income tax. This has not always been the case and the continuation of this provision is in doubt. Previous Congresses have resisted making this benefit permanent; the 105th Congress extended the benefit for another year in 1998.

The U.S. Department of Labor reports that the number of jobs requiring at least an associate's degree will grow faster than average job growth.[6] Jobs requiring the least education

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[1] National University Continuing Education Association. *Lifelong Learning Trends* (Washington, D.C.: 1996).
[2] University of Pennsylvania. "The Landscape," *Change* (Washington, D.C.: Institute for Research on Higher Education, March/April 1997), p. 39.
[3] U.S. Department of Commerce. *Statistical Abstract of the United States: 1997* (Washington, D.C.: Bureau of the Census, 1997), p. 25.
[4] U.S. Department of Education. *Education and the Economy: An Indicators Report* (Washington, D.C.: National Center for Education Statistics, 1997), www.NCES.ed.gov/pubs97/97939.html.
[5] U.S. Department of Labor. *Change in Employment by Education and Training Category, 1994-2005* (Washington, D.C.: Bureau of Labor Statistics, 1995).
[6] U.S. Department of Labor. *Employment Outlook: 1994-2005* (Washington, D.C.: Bureau of Labor Statistics, 1995), p. 7.

will experience the slowest growth while professional specialties will encounter the fastest job growth. Many employees will have an incentive to improve their job prospects by continuing their education.

Employers provide the majority of the work-related employee training. This type of training is important to the employer, but is seldom conducted with the assistance of colleges and universities. According to a National Center for Education Statistics (NCES) report, based on Bureau of Labor Statistics (BLS) data, 41 percent of the U.S. workforce received skills improvement training on the job in 1991, up from 35 percent in 1983.[7] Employees differ in their chances of participating in job training. The study reported that employer-provided training was more likely to be provided to those with more education. Sixty-one percent of employees with a college education participated in employer-provided training, compared with 46 percent with some college and 29 percent with a high school diploma or less. Workers in highly skilled occupations such as managerial, professional or technical jobs were more likely to participate in employer-provided training than those in less skilled occupations. Those who participated in employer-provided training benefited by increased earnings compared with those who did not.

In 1995, the BLS did a survey of employer-provided training.[8] The report confirmed the fact that employer-provided training is widespread. Eighty-four percent of employees received some type of formal training and 96 percent received some type of informal training on the job. Computer training was the most commonly received type of job-skills training (38 percent of employees) and occupational-safety training was the type of general skills training taken most frequently by 58 percent of the employees.

The BLS survey found that participation in training programs was not evenly distributed among employees. The youngest and oldest workers were less likely to have received formal training during the last 12 months than were workers ages 25 to 54. The total hours of training were lowest for the youngest and oldest workers. Workers 24 years of age or younger and 55 years or older received about one-half as many hours of training as workers between these ages. Employees with less than two, or more than four, years of experience received more training than did those with two to four years of experience. Perhaps employers are willing to provide general

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[7] U.S. Department of Education. *Education and the Economy: An Indicators Report.* (Washington, D.C.: National Center for Education Statistics, 1997), www.ed.gov/NCES/pubs97/97939.html.

[8] U.S. Department of Labor. *1995 Survey of Employer-Provided Training-Employee Results.* (Washington, D.C.: Bureau of Labor Statistics, 1996), stats.bls.gov/news.release/sept.nws.htm.

training for new workers, but offer specialized training when the employee is more experienced in his or her job. Alternatively, training may not be appropriate until the new employee is experienced in the job. Full-time workers received more training than did part-time workers.

Level of education before employment was also related to employee participation in employer-sponsored training, according to the BLS survey. Workers with a high school education or less were less likely to participate in training than were workers with more education. Sixty percent of employees with no more than a high school diploma participated in employer-provided training programs compared with 90 percent of employees with bachelor's degrees or higher. Because prior education level is associated with income, it is not surprising that being in the lowest earnings quartile was associated with a lower probability of receiving training than employees in higher earnings quartiles.

Background differences such as prior education may be associated with the variation in training activities experienced by members of the racial and ethnic groups surveyed. According to BLS, white, non-Hispanic employees received more training than black, non-Hispanic or Hispanic employees.[9]

Organization type, industry, and employee occupation all relate to participation in employer-provided training programs. Smaller organizations, those with fewer than 100 employees, and those that provided fewer benefits overall were less likely to provide training than larger organizations who provided more employee benefits of all types. Service workers were less likely to receive training than those in other occupations while professional and technical workers received the most training. By industry, manufacturing employees received the most training and retail trade the least. Those in more technical or professional jobs were also more likely to participate in employer-provided training.

Much of the growth in college and university enrollment over the last decade came from an increase in the number of part-time students. Between 1984 and 1993, full-time undergraduate enrollment increased 13 percent while part-time enrollment increased 20 percent.[10] Many of these part-time students were working adults. College leaders may interpret this as

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[9] U.S. Department of Labor. *1995 Survey of Employer-Provided Training-Employee Results*. (Washington, D.C.: Bureau of Labor Statistics, 1996), stats.bls.gov/news.release/sept.nws.htm.

[10] U.S. Department of Education. *Digest of Education Statistics, 1995*. (Washington, D.C.: National Center for Education Statistics, 1995), p. 189.

evidence that employees have turned to their institutions to improve their job skills but colleges rank last in a list of employer-provided training settings.

The BLS report ranked the employer-provided training settings:

- Classes by company training personnel 76%
- Classes or workshops by outside trainers 48%
- Lectures, conferences or seminars 36%
- Educational institutions 17%

This report is limited to examining the support employers provide employees attending postsecondary education institutions. However, postsecondary education, or credential education, is only one type of education activity supported by employers. In terms of employer support, job training may be the most important category of adult and continuing education.

The BLS survey suggests that organizations other than colleges and universities may provide the bulk of adult training. Employers and employees may not perceive traditional academic programs as relevant to their specific job-training needs. Thus, college and university enrollment may not increase as more working adults seek specialized job training. Some postsecondary institutions may provide contract training to employers outside of the regular credit program.

Most job training is short: the BLS estimates that employees spend a total of 89 hours per year in job training.[11] That represents the time it would take to complete one three-unit academic class. Traditional academic programs take more time and are not as focused on specific job skills as industry consultants and training organizations. This finding challenges the expectation that postsecondary degree and credential programs may develop as major providers of recurring job training. The fact remains that employer aid is an important source of support for a minority of postsecondary students.

Employers may be less likely to provide support to individuals enrolling in courses for self-improvement, recreation, or health reasons, and some courses may not have costs associated with them. For example, soon-to-be parents may take childbirth classes as part of their prenatal

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[11] U.S. Department of Labor. *1995 Survey of Employer-Provided Training-Employee Results*. (Washington, D.C.: Bureau of Labor Statistics, 1996), stats.bls.gov/news.release/sept.nws.htm.

health care programs, while others may attend Bible study classes at their church. These may qualify as adult education and may be free.

Several questions provide the organizational basis for this report:

1. What types of training and education did employers support?

2. How important were postsecondary institutions in providing employer-supported training and education compared with other sources of education?

3. Which postsecondary institutions were most likely to enroll students who received help from their employers?

4. Which types of employees were most likely to receive financial support from employers if they enrolled in a credential program?

DATA SOURCES AND DEFINITIONS

NPSAS

This report draws on two data sets. The first is the 1995-96 National Postsecondary Student Aid Study (NPSAS:96) which is a nationally representative sample of students enrolled in accredited postsecondary institutions. The sample limits the results to undergraduate, graduate and first-professional students enrolled in degree granting programs. The database includes details on institutional characteristics, description of students, educational price of attendance, and student aid received by students. NPSAS provides a detailed description of adults who enroll in credit classes and how they pay for their education. NPSAS does not provide information on education that takes place outside accredited postsecondary institutions.

NHES

The second source is the 1995 National Household Education Survey (NHES:95). NHES is a random telephone survey of households. Sampled household members were weighted to represent the U.S. civilian, non-institutionalized population. The survey questions covered two topics: the Adult Education component collected information about adult participation in adult education programs, and the Early Childhood Program Participation component collected information about participation in childcare and early childhood programs.

This analysis reports findings from the NHES Adult Education component, which was based on interviews with 19,722 respondents 16 years or older who were not enrolled in elementary or secondary school, or not on active duty in the military. Up to two adults in each household were selected as a respondent to describe adult education activities.

Respondents were asked about their participation in seven types of adult education activities or programs:

- Adult basic education and General Equivalency Degree classes (ABE/GED)
- English as a Second Language studies (ESL)
- Courses taken toward college degrees or vocational diplomas (credential programs)
- Apprenticeship programs
- Career or work-related programs
- Other formally structured courses
- Computer-only or video-only classes

Individuals could indicate that they participated in more than one type of adult education activity. They might have also participated in more than one program in a type of education activity. In the former case, the separate programs were counted as independent events. In the latter case, the individual activities were combined and treated as one. Those who participated in more than one type of activity are reported for each activity separately.

Work-related programs included any formally structured education or training specifically related to work. This did not include informal on-the-job training. Work-related programs excluded academic credential programs taken to improve work skills. This does not mean that the academic programs were not related to work. Other structured programs included such things as arts and crafts, sports or recreation, first aid or childbirth, Bible study, or any other types of formal courses not included in any other section.

Adults who participated in ABE/GED and ESL courses were consolidated into one group for this analysis. Because they were so scarce, analysis was not completed on adults who participated in apprenticeship programs. Further, the survey was structured so very few questions were asked about computer or video classes; therefore, this category was excluded from the analysis as well.

The NHES survey was structured so that questions and items were worded differently across the education categories. Although an effort was made to make the different categories as homogeneous as possible, it was not possible to report the same information about each type of adult education program.

The typology of classes is necessarily ambiguous. When respondents were asked to classify programs in which they participated, they may not have had the same understanding as the professional educators who designed the classification system. Therefore, the category "other structured programs" may include work-related programs along with those taken for personal reasons. Credential programs may include courses taken for "continuing education units" (CEUs) or other certificates not commonly associated with college degrees or postsecondary certificates. Some respondents indicated that they enrolled full-time, but they attended for less than a month. When respondents indicate that they attended full-time, it may not coincide with the traditional academic measure of an academic year.

Definition of employer aid

The NHES data can be distilled to two definitions of employer aid. In practice, employer assistance ranges from allowing flextime so employees could fit a class into their schedule, to paying the price of the class. Examples of employer support include providing facilities for the class to be held on-site, or allowing the employee time off with or without pay. Employer support means the employer facilitated the training or education using means other than cash payment. If cash support was provided, it is classified as "employer paid," if the employer provides any other type of assistance, it is called "employer provided support."

Employer aid means that the employer provided cash payment to the employee for his or her participation in a formal training or education program. Employer aid for education may take several forms. Examples include paying all or part of the tuition at a postsecondary institution or paying for attendance at a conference where the employee attended a training workshop. Any amount of cash support from the employer qualified as employer aid for training. The student may have received other support from the employer in addition to cash. All students who received cash payment were classified as receiving employer aid and not included in the employer support group. All the reporting categories are mutually exclusive.

In the case of NPSAS, the only reported employer support is financial aid. It is not possible to report other types of employer support because the information was not collected.

Differences between NHES and NPSAS

These ambiguities in the NHES data limit the value of direct comparisons to NPSAS. Results from the two datasets are not directly comparable for at least three reasons. First, they did not have the same purpose: NHES asked questions about a range of educational activities while NPSAS collected more detailed information on students enrolled in accredited postsecondary education. Second, the NPSAS project collected data exclusively from students attending postsecondary institutions, the institution they attended, and their parents. The NHES project collected information from a sample of households, whether or not they had been involved in formal education or training over the previous year. Third, the two surveys asked different questions.

Given their differences, the two databases complement one another. They provide different views of employer support for employees who participated in education or training programs. The NHES data allow examination of the participation in all types of education and training programs. This database helps put formal postsecondary education in context of the larger spectrum of training and educational activities. Perhaps most importantly, the NHES data are unique in allowing identification of the types of training employers supported in addition to credential programs offered by postsecondary institutions. The weakness of the NHES data is that NHES does not provide information about the amount of cash support provided by employers and only very general information about the programs taken.

The NPSAS data provide no information about education and training activities outside accredited postsecondary institutions. The NPSAS data provide information about educational programs, the financial details, and the characteristics of undergraduates and graduate students in accredited postsecondary institutions. This database provides more detail about the price of attendance and other forms of support the students received than the NHES database.

The NHES tables are presented first in this report to provide an overview of the types of training and education for which students received employer aid. The NPSAS tables follow with more detailed information about students who received employer financial aid while enrolled in accredited postsecondary institutions. Results from the two data sets are not comparable.

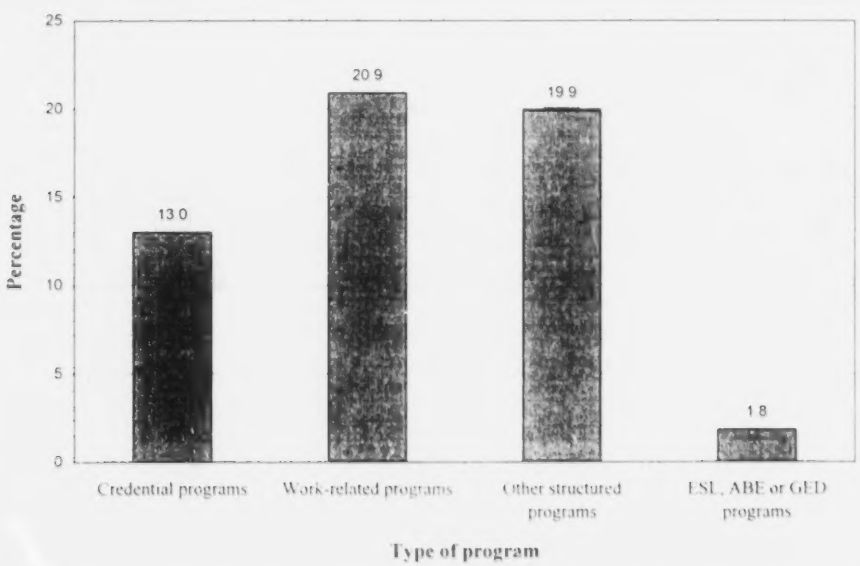
RESULTS FROM NHES

Types of Education and Training Programs

The central purpose of this report is to describe the use of employer-provided financial aid by students seeking a degree or credential. Credential programs are not the only type of education or training activity that employers might fund. In addition to providing cash compensation to employees who take education or training programs, employers might provide other types of support such as time off, access to a room for the class or changing the work schedule to accommodate the class schedule.

Figure 1 shows the enrollment of adults in several different types of education or training programs. Twenty-one percent of adults reported enrolling in work-related programs and 20 percent in other structured programs compared with 13 percent in credential programs.

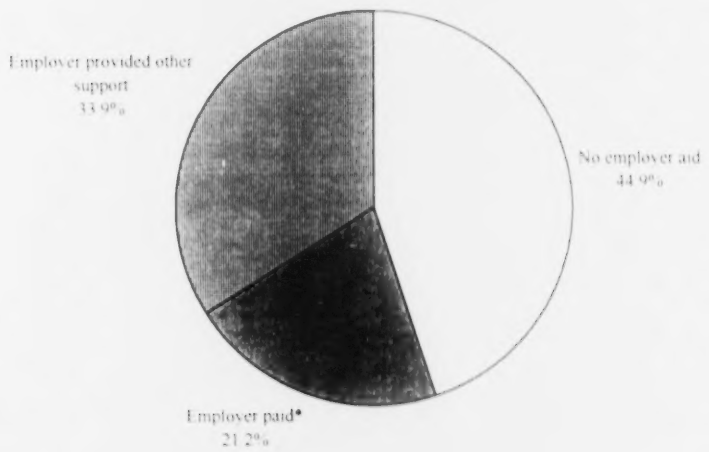
Figure 1—Percentage of adults who participated in credential, work-related, other structured, or ESL, ABE or GED programs: 1995



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Two percent of adults participated in English as a Second Language (ESL), Adult Basic Education (ABE) or General Equivalency Degree (GED) programs (figure 1). Twenty-one percent of adults who enrolled in ESL, ABE or GED classes received cash assistance from their employer and 34 percent received some other type of employer aid; 45 percent did not receive employer assistance of any type (figure 2). Too few people enrolled in ESL, ABE or GED classes to make meaningful comparisons between those who did or did not receive employer aid. For this reason, the report does not provide any further analyses of participants in ESL, ABE and GED programs.

Figure 2—Percentage distribution of adults enrolled in ESL, ABE or GED classes according to type of employer aid* received: 1995



*Respondents who received cash assistance from their employers may or may not have received other forms of employer support.

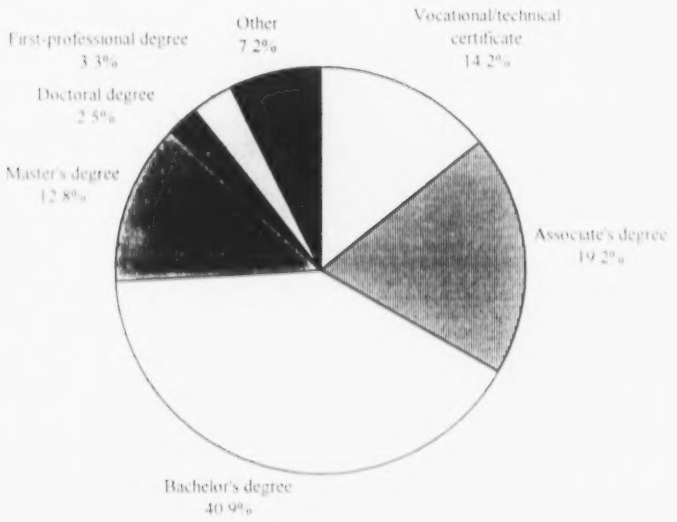
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

According to NHES, 13 percent of adults participated in credential programs at some point during the year (figure 1). This may overestimate the actual enrollment. Because

respondents were asked to classify their own education or training program, the meaning of the term credential may not coincide with the formal definition used by educators. Many respondents may have identified training related to job credentials or certificates as academic credentials. It was not possible to conclude that a credential program as defined in NHES equated with enrollment in a postsecondary credential program.

Forty-one percent of the adults in credential programs were seeking bachelor's degrees (figure 3). This was followed by 19 percent who sought associate's degrees. Fourteen percent sought vocational or technical certificates, and 13 percent sought master's degrees. The remaining students were distributed among other degree programs.

Figure 3—Percentage distribution of adults enrolled in credential programs according to highest level program enrolled in: 1995



NOTE: Percentages may not sum to 100 percent due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Most adults seeking credentials or degrees enrolled in postsecondary institutions. Some, however, enrolled in programs offered by providers other than traditional colleges and universities. Table 1 displays the distribution of adults who enrolled in credential programs according to provider. Fifty-three percent of the adults seeking credentials or degrees attended a 4-year college or university.[12] Another 23 percent attended 2-year community or junior colleges, 6 percent attended 2-year vocational or technical schools, and 5 percent attended private vocational or trade schools. These four institutional types accounted for 87 percent of the credential enrollment. However, some adults reported enrolling in credential programs provided by businesses or industries (3 percent), professional associations (1 percent), primary or secondary schools (1 percent), or other providers (5 percent). Four percent report having enrolled in multiple institutions.

Given that these latter types of institutions do not usually provide postsecondary education, three possible explanations may clarify the results. First, some organizations whose principal business is not education offered credential programs. For example, hospitals often have formal academic programs in medical specialties. Second, colleges and universities may provide classes in non-campus settings, which may have confused respondents about which organization provided the education. Third, adults may have taken Continuing Education Units (CEUs) or other certification classes required by their occupations or employers. These credits would not have qualified as credits provided by accredited postsecondary education institutions, but they may have been interpreted as academic credits by the adults.

Adults who sought education and training from postsecondary institutions usually reported seeking degrees affiliated with the institutions' levels. For example, 79 percent of those seeking bachelor's degrees attended 4-year institutions, as did 89 percent of those seeking master's degrees and 83 percent of those seeking doctoral degrees. Further, 71 percent of the adults seeking associate's degrees were enrolled in 2-year colleges. Adults who reported seeking degrees not congruent with the level of institution may have reported long-term goals rather than the actual program of current enrollment. For example, an adult with a long-term goal of a bachelor's degree or higher may have enrolled in a 2-year college.

Although the reporting categories provide useful information, care should be taken in using the results of the NHES analysis to describe enrollment in vocational and technical

[12]It was not possible to distinguish between public and private, 4-year providers on NHES.

programs. Twenty-three percent of adults who sought vocational/technical degrees or certificates did so in 2-year vocational or technical schools. Another 15 percent of adults who sought vocational/technical certificates or degrees took their instruction from other providers that were not listed separately, 11 percent from businesses or industries, and 5 percent from professional associations. None of these latter providers qualify as postsecondary institutions. These results suggest that some adults may have a broader definition of credential education than that offered by accredited postsecondary institutions.

Table 1—Percentage distribution of adults in credential programs according to type of institution offering program, by selected characteristics: 1995

	Primary/ secondary school	2-year community or junior college	2-year vocational or technical school	4-year college or university	Private vocational or trade school	Business, industry	Professional association	Other	Multiple
Total	0.9	22.8	5.5	53.3	5.0	2.8	1.3	4.5	4.0
Highest level of credential program enrolled in									
Vocational/technical certificate	2.9	14.3	22.8	6.2	20.7	10.7	4.6	15.1	2.8
Associate's degree	0.7	70.8	6.7	12.3	2.9	0.6	0.3	2.4	3.4
Bachelor's degree	0.3	13.3	1.0	79.0	0.7	0.5	0.1	0.7	4.5
Master's degree	0.4	2.9	0.1	89.4	1.1	0.2	0.0	2.1	3.8
Doctoral degree	0.7	2.4	0.0	82.7	2.4	0.6	0.0	7.2	4.2
First-professional degree	0.0	6.4	2.0	69.9	2.9	1.8	4.2	3.0	9.9
Other	2.2	15.8	6.0	28.2	13.4	11.9	5.4	15.1	2.1
Average hours in class per week for part-time credential programs[1]									
Less than four	1.3	21.6	5.7	49.6	5.0	4.1	1.9	5.6	5.2
Four to six	1.2	31.4	5.9	42.7	4.7	3.1	1.2	3.5	6.3
More than six	0.9	32.8	6.4	37.1	5.5	4.6	0.9	5.8	6.0
Average hours in class per week for full-time credential programs[2]									
Less than four	2.3	15.0	3.8	52.5	2.5	2.5	1.6	11.7	8.3
Four to six	0.7	16.0	4.1	55.3	3.3	5.8	2.7	8.3	4.0
More than six	0.6	19.7	5.2	59.9	5.2	1.2	0.9	3.2	4.2
Average months in class for part-time credential programs[1]									
Less than three	1.4	19.1	6.1	36.3	9.9	8.2	1.0	8.0	10.0
Three to five	1.6	31.0	6.3	41.7	4.1	2.4	1.1	5.6	6.2
Six to eight	0.7	34.3	7.4	42.1	4.0	3.0	1.4	2.5	4.8
Nine to twelve	0.3	30.8	4.4	51.7	2.7	3.5	2.0	3.0	1.7
Average months in class for full-time credential programs[2]									
Less than three	0.5	16.8	11.8	28.2	12.1	6.8	4.8	10.4	8.7
Three to five	0.4	22.9	6.3	48.5	5.7	1.6	0.7	6.6	7.3
Six to eight	1.9	24.3	4.1	57.6	4.0	1.1	0.4	2.3	4.5
Nine to twelve	0.1	14.4	3.3	74.5	3.3	0.7	0.7	1.6	1.3

Table 1—Percentage distribution of adults in credential programs according to type of institution offering program, by selected characteristics: 1995--Continued

	Primary/ secondary school	2-year community or junior college	2-year vocational or technical school	4-year college or university	Private vocational or trade school	Business, industry	Professional association	Other	Multiple
Credential program part of assistantship or fellowship									
Part of assistantship or fellowship	0.0	5.8	0.6	84.5	6.7	0.0	0.0	0.0	2.3
Not part of assistantship or fellowship	0.0	9.0	2.6	80.2	3.1	0.0	0.0	0.0	5.0
Employer required credential program[3]									
Employer required	1.6	7.2	3.8	32.0	4.0	12.0	6.2	17.8	15.4
Employer did not require	0.6	24.6	4.9	55.7	3.9	2.5	1.0	2.8	4.0
Employer aid provided for credential program part of union contract[4]									
Aid part of union contract	0.5	21.3	6.3	34.1	2.3	5.2	8.0	15.0	7.4
Aid not part of union contract	0.7	21.8	4.1	51.6	2.9	5.4	1.9	5.2	6.4
Number of courses									
One	2.9	17.4	12.1	31.5	12.6	8.0	3.7	11.9	0.0
Two	1.4	26.8	4.3	46.5	6.3	3.0	1.2	8.3	2.4
More than two	0.3	23.5	4.1	59.7	3.0	1.5	0.7	2.1	5.2
Employer aid for credential programs[5]									
No employer aid	1.1	26.5	6.7	53.2	6.8	0.7	0.3	2.4	2.3
Employer paid[4]	1.0	16.8	4.8	44.2	2.5	9.4	4.5	8.5	8.3
Employer provided other support	0.4	21.7	3.0	62.9	4.1	1.2	0.2	2.5	4.0

Table 1—Percentage distribution of adults in credential programs according to type of institution offering program, by selected characteristics: 1995--Continued

	Primary/ secondary school	2-year community or junior college	2-year vocational or technical school	4-year college or university	Private vocational or trade school	Business, industry	Professional association	Other	Multiple
Major, highest level credential program									
Humanities	0.8	12.6	1.6	78.3	0.7	0.9	0.2	1.2	3.7
Social, behavioral science	0.0	18.7	1.4	74.3	0.7	0.0	0.0	1.1	3.9
Life, physical science	0.0	16.7	2.5	75.1	2.9	0.0	0.0	1.4	1.5
Mathematics	0.0	35.2	15.4	34.6	5.8	3.6	0.0	2.0	3.5
Computer, information science	0.7	21.4	6.9	52.0	3.8	5.2	4.0	1.8	4.3
Engineering	0.7	18.5	1.7	71.5	1.2	0.2	--	2.6	3.6
Education	0.9	27.4	3.6	53.3	4.5	2.4	1.0	1.9	5.0
Business, management	0.4	30.1	8.9	41.8	10.1	--	1.2	3.7	3.9
Health	2.5	23.5	16.4	24.5	5.5	8.6	0.4	13.8	4.7
Vocational, technical	0.9	20.4	6.2	49.4	7.1	2.4	1.5	8.0	4.1
Other	--	--	--	--	--	--	--	--	--

--Sample size too small for a reliable estimate.

[1]Includes only respondents who participated in part-time credential programs.
[2]Includes only respondents who participated in full-time credential programs.
[3]Includes only employed respondents.
[4]Includes only employed respondents who received employer aid.
[5]Respondents who received cash assistance from their employer may or may not have received other forms of employer support.

NOTE: Percentages may not sum to 100 percent due to rounding. The zero percentages in the table round to less than 0.1 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

CHARACTERISTICS OF ADULTS PARTICIPATING IN ADULT EDUCATION PROGRAMS

Credential programs

Students who work and employees who attend school

The NHES data include all adults regardless of whether they worked or not, but so few adults did not work that it is not possible to report them separately. However, these non-working adults are included in the tables, except where it has been noted that variables apply to employed respondents only. The NHES database does not provide information that allows users to directly determine whether credential students perceived themselves as primarily students who worked or employees who took classes. Yet, the results suggest that many respondents were students who worked. This status was surmised by students' enrollment patterns. Adults working part-time while they attended school full-time, especially if they were under 24 years of age and not married, may be classified for purposes of this report as postsecondary students who worked. As will be seen later, a relationship exists between enrollment intensity and employer support.

Table 2 shows that one-half of the adults who were less than 24 years old enrolled in credential programs. Older adults were less likely to enroll in credential programs. Sixteen percent of those between 24 and 39 years of age enrolled in credential programs. Eight percent of those 40 to 54 years of age, 1 percent of those 55 to 69 years old, and less than 1 percent of those 70 or older enrolled in credential programs. Students under 24 years of age are generally defined as traditional age students.

Another factor related to enrollment in credential programs was marital status. Adults who were married or divorced were less likely to have taken credential programs than were those who had never been married. Eight percent of adults who were married and 11 percent of those who were divorced took credential programs compared with 34 percent of those who were never married.

Financially or occupationally established adults were less likely than others to enroll in credential programs. One indicator of being financially established is home ownership. Seven percent of the homeowners were enrolled in credential programs, compared with 19 percent of the renters and 30 percent of those who had other living arrangements. Also, adults who earned $20,000 or less annually were more likely to enroll in credential programs than were those with earnings in one of the higher income categories. Twenty percent of adults with incomes $20,000

or less were enrolled in credential programs during the previous year compared with 14 percent for those with incomes between $20,001 and $35,000, 11 percent between $35,001 and $50,000, and 8 percent $50,001 or more.

Students working part-time and not receiving employee benefits were more likely to be in credential programs compared with others. Adults who did not receive any employee benefits were more likely to have enrolled in credential programs than were those who had a job with employee benefits, 26 percent compared with 14 percent. Adults who worked less than 30 hours a week (part-time) were more likely to have enrolled in credential programs than those who worked 30 or more hours (full-time). Twenty-seven percent of those who worked part-time enrolled in credential programs, compared with 13 percent of the full-time workers.

These results suggest that a large share of adults enrolled in credential programs may have been postsecondary education students who worked. This concept has been developed in a previous NCES report.[13] Several factors are consistent with this conclusion. First, one-half of the adults less than 24 years of age were in credential programs, compared with 16 percent of those between 24 and 39. Second, 34 percent of adults who were never married were in credential programs, compared with 8 percent of those who were married. Third, 27 percent of those who worked part-time enrolled in a credential program, compared with 13 percent of those who worked full-time, which suggests that many of the former were students who worked. Finally, 26 percent of the adults who received no employee benefits were enrolled in a credential program, compared with 14 percent of those who did receive employee benefits.

Work-related programs

Student characteristics

Twenty-one percent of adults participated in work-related programs. Work-related programs tend to cover topics that are more specific, taught in concentrated courses, and are offered by different providers than credential programs provided by accredited postsecondary programs. Examples of these types of courses are computer software applications, time management or sales training courses.

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[13] U.S. Department of Education. *Profile of Undergraduates in U.S. Postsecondary Education Institutions: 1995-96* (Washington, D.C.: National Center for Education Statistics, 1998), www.NCES.ed.gov/pubs98/98084.htm

Adults between the ages of 24 and 54 were more likely to participate in work-related programs than were those who were younger or older. Twenty-seven percent of those aged 24 to 39 and 30 percent of those 40 to 54 years old participated in work-related programs, compared with 13 percent of those under 24, 11 percent of those between 55 and 69 years old and 1 percent of those 70 and over (table 2). Twenty-four percent of the adults who were married participated in work-related programs and were more likely to have participated than those who had never been married (19 percent).

More established adults were more likely to participate in work-related programs than those who were not as well established. The definition of established adults includes home ownership, earning more than $20,000 annually, or receipt of employer benefits. Adults who owned their home were more likely to have participated in work-related programs (24 percent) than were those who rented (17 percent). Adults who earned $20,000 or less were less likely to have participated in work-related programs than were those who earned more than $20,000. Nineteen percent of those earning $20,000 or less participated in work-related programs; the share taking work-related programs jumped to 35 percent for those earning between $20,001 and $35,000, and reached 44 percent and 45 percent for the next two higher income categories. Further, adults who received employee benefits from their employer were at least twice as likely to have participated in work-related programs (35 percent) as those who did not receive employee benefits (15 percent).

Occupation-related characteristics

Participation in work-related programs varied by occupation. Forty-one percent of adults who were executives, administrators or managers participated in work-related programs. Occupations where employees were less likely to participate in work-related programs included marketing and sales (23 percent), administrative support (28 percent), service (20 percent), agriculture, forestry and fishing (11 percent), production (14 percent), transportation and materials moving (15 percent), and handlers, cleaners, helpers, or laborers (8 percent).

Participation in work-related programs also varied by industry. Fourteen percent of adults in agriculture, forestry, or fishing industries participated in work-related training. In comparison, adults working in the following industries had a higher probability of participating in work-related training: finance, insurance and real estate (47 percent), service (28 percent), health services (44 percent), education (41 percent), and public administration (45 percent).

Other structured programs

Other structured training and education programs include a wide range of programs that adults took for personal reasons. By definition, they were not work-related nor associated with receiving a degree or certificate. Twenty percent of adults enrolled in other structured programs.

Gender, age, and having dependents were each associated with the probability of enrolling in other structured programs. Females were more likely to participate in other structured programs (24 percent) than males (16 percent). Adults under 55 were more likely to participate than those 55 or older (22 percent for all adults 54 or younger compared with 16 and 13 percent for adults 55-69 and 70 and older, respectively). Adults with no household members under 18 were less likely to participate in other structured programs (18 percent) compared with those with household members under 18 (22 percent of those with one and those with two or more household members under 18).

Both low income and less education were associated with lower probabilities of enrolling in other structured programs. Adults with total household incomes of $20,000 or less were less likely to participate in other structured programs than were those with incomes over $20,000 (14 percent compared with 19, 22, and 25 percent). Adults with high school diplomas or less were less likely to participate in other structured programs than those with some postsecondary education, associate's, bachelor's or master's degrees (16 and 9 percent compared with 25, 27, 27 and 29 percent respectively). No significant differences existed in the chance of participating in other structured programs by levels of personal income. Twenty-one to 23 percent of those in each category of personal income reported participating in another structured program.

Two characteristics were associated with participation in all three types of training and education programs. The first was age. Adults 55 and over were less likely than those who were younger to participate in any of the three programs. The second was education. Those adults with high school diplomas were less likely to participate in any of the three types of training than those with associate's degrees (7 percent compared with 21 percent for those who participated in credential programs; 14 percent compared with 32 percent for those who participated in work-related programs; and 16 percent compared with 27 percent for those who participated in other structured programs).

Table 2—Percentage of adults who participated in credential, work-related or other structured programs, by selected characteristics: 1995

	Credential programs	Work-related programs	Other structured programs
Total	13.0	20.9	19.9
Gender			
Male	12.7	21.8	15.8
Female	13.3	20.2	23.5
Race/ethnicity			
White, non-Hispanic	12.6	22.8	20.8
Black, non-Hispanic	15.5	16.2	18.9
Hispanic	10.8	11.8	13.8
American Indian/Alaskan Native	16.5	20.6	21.6
Asian/Pacific Islander	19.0	18.1	15.9
Other	16.9	15.2	18.1
Marital status			
Married	8.1	23.5	21.2
Separated	9.2	16.4	16.9
Divorced	10.7	23.4	19.0
Widowed	0.9	3.7	13.2
Never married	33.7	19.1	19.1
Age			
Less than 24	49.9	13.0	21.8
24-39	16.1	26.8	21.6
40-54	8.2	30.3	22.2
55-69	1.1	11.0	16.0
70 or more	0.1	1.4	12.6
Highest level of education completed			
Less than high school	2.0	5.1	8.5
High school diploma or equivalent	6.9	14.2	15.7
Some postsecondary education	27.7	22.3	24.7
Associate's degree	20.8	32.1	27.4
Bachelor's degree	13.6	36.1	27.0
Graduate degree	15.7	40.4	29.1
Number of household members under 18			
None	12.9	17.8	18.2
One	15.0	24.5	22.4
Two or more	11.8	26.1	22.2
Own or rent home, or other arrangement			
Own home	7.4	23.5	20.6
Rent home	19.4	17.4	18.2
Other arrangement	29.6	14.9	19.8

Table 2—Percentage of adults who participated in credential, work-related or other structured programs, by selected characteristics: 1995--Continued

	Credential programs	Work-related programs	Other structured programs
Language spoken most at home			
English	13.3	21.8	20.5
Spanish	5.4	5.5	10.3
Other language	17.0	12.6	11.4
Annual personal earnings			
$20,000 or less	20.0	19.3	21.1
$20,001-$35,000	13.7	35.2	23.2
$35,001-$50,000	10.6	43.9	21.8
Over $50,000	7.9	45.4	23.1
Total household income			
$20,000 or less	13.3	8.1	13.9
$20,001-$35,000	11.5	16.8	19.3
$35,001-$50,000	13.8	25.7	22.3
Over $50,000	13.5	34.9	25.0
Respondent's current occupation			
Executive, administrative, managerial	10.2	41.3	22.7
Engineer, surveyor, architect	18.6	43.5	24.3
Natural scientist, mathematician	14.1	58.9	24.4
Social scientist/worker, lawyer	20.0	59.5	31.2
Teacher, postsecondary	7.5	40.7	25.3
Teacher, except postsecondary	23.9	52.3	36.3
Physician, dentist, veterinarian	7.7	67.7	17.7
Registered nurse, pharmacist	15.9	71.2	32.5
Writer, artist, entertainer, athlete	18.2	21.8	28.9
Health technologist/technician	23.9	45.5	32.1
Technologist, not health	22.6	40.5	29.0
Marketing, sales	18.0	22.5	20.6
Administrative support	16.6	28.2	24.5
Service	19.6	20.2	22.4
Agriculture, forestry, fishing	8.9	10.6	15.2
Mechanic, repairer	10.0	26.8	15.6
Construction	9.1	16.2	17.9
Precision production	7.4	22.9	16.2
Production	10.4	13.9	10.7
Transportation, material moving	8.2	14.5	10.3
Handler, cleaner, helper, laborer	14.1	8.2	8.4
Other	17.5	33.2	20.8
Multiple jobs, multiple occupations	26.8	40.0	27.4

Table 2—Percentage of adults who participated in credential, work-related or other structured programs, by selected characteristics: 1995--Continued

	Credential programs	Work-related programs	Other structured programs
Industry of respondent's current job			
Agriculture, forestry, fishing	6.0	14.2	14.7
Mining	3.5	28.9	22.5
Construction	8.7	17.0	16.4
Manufacturing	9.9	21.5	15.1
Transportation, public utilities	12.7	31.3	22.7
Wholesale trade	10.3	12.6	14.8
Retail trade	21.3	12.6	17.5
Finance, insurance, real estate	16.0	47.4	24.0
Service	17.0	28.2	25.2
Health services	18.7	44.4	28.9
Education	19.5	41.3	28.0
Public administration	15.4	44.7	26.1
Other	12.2	29.4	19.5
Multiple jobs, multiple industries	26.9	39.8	26.4
Hours worked per week*			
Less than 30	27.1	20.5	25.8
30 or more	12.6	33.2	21.3
Employer provided any employee benefits*			
Employer did provide employee benefits	13.6	34.6	22.0
Employer did not provide employee benefits	26.3	15.4	22.7

*Includes only employed respondents; therefore, totals may not be within the range of the subgroup estimates.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

ADULT EDUCATION AND EMPLOYER AID

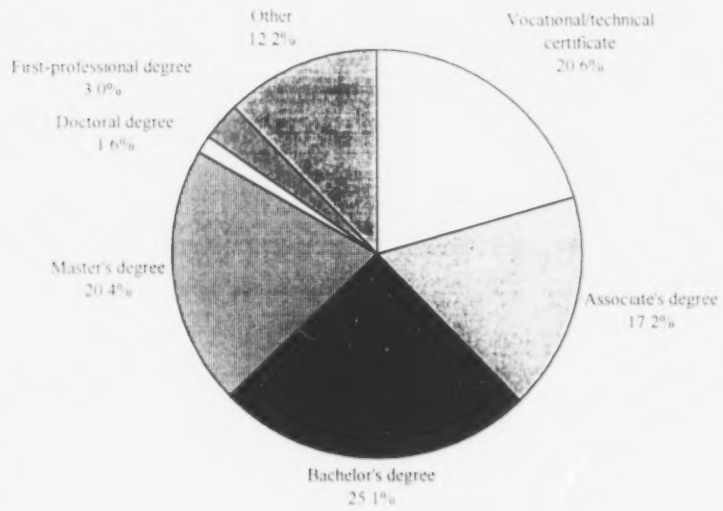
Credential programs

The following section provides a description of adults' characteristics in credential programs by the type of employer aid they received. Employers may have helped employees with support such as cash assistance, release time, classroom space, or instruction. Of the 13 percent of adults enrolled in credential programs, 43 percent did not receive any type of assistance, cash or other, from their employer (table 3). One-third of adults in credential programs received some help from their employers, but no cash assistance. The final 24 percent reported some cash assistance from their employers. An individual who received cash assistance might have received other employer support also. The following comparisons reflect only

credential program participants who received cash support that employers paid for all or part of the price of attendance.

Figure 4 shows that one-quarter of those receiving employer financial aid were seeking bachelor's degrees. Twenty percent of the adults who received employer financial aid were seeking master's degrees and 21 percent were seeking vocational/technical certificates. Seventeen percent of the employer financial aid recipients were seeking associate's degrees, and 12 percent were in other degree programs. The remaining adults sought either doctoral (2 percent) or first-professional degrees (3 percent).

Figure 4—Percentage distribution of adults enrolled in credential programs who received employer financial aid according to level of degree program: 1995



NOTE: Percentages may not sum to 100 percent due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Employee characteristics

Employees with higher incomes who participated in credential programs were more likely to receive employer financial assistance for their educational expenses than were others. In addition, males were more likely to obtain employer financial aid than females, and married employees received more help than those who were single, as did employees living with children compared with those not living with children.

Table 3 shows that adults under age 24 were less likely to receive financial help for credential program expenses from their employers than those who were older. Seven percent of adults who were less than 24 years old and enrolled in credential programs received cash support from their employers, compared with 32 percent of those who were aged 25 to 39. Recall that one-half of the adults under 24 enrolled in credential programs (table 2).

Family status and gender were related to receipt of educational financial aid from employers. Twenty-seven percent of males who enrolled in credential programs had their employer pay at least part of the educational expenses compared with 21 percent of females (table 3). Married adults enrolled in credential programs were three times as likely to have their employers paying at least part of the expenses (39 percent) than those who were never married (12 percent). Finally, about one-third (34 percent) of adults with two or more household members under 18 enrolled in credential programs had their employer paying at least part of the price of attendance compared with one-fifth of those without any minor household members.

Employers were more likely to pay for credential programs for higher-paid adults. Eleven percent of those with personal earnings of $20,000 or less who enrolled in credential programs had their employers pay at least part of their education expenses (table 4). Forty-five percent of those earning between $20,001 and $35,000 received financial help from their employers if they enrolled in credential programs. The share receiving support for those earning between $35,001 and $50,000 was 56 percent, and 58 percent for those earning more than $50,000. Compared with those who earned $20,000 or less, all of those in the higher income categories were more likely to receive employer financial aid if they enrolled in a credential program.

Table 3—Percentage distribution of adults enrolled in credential programs who received employer aid* according to type of employer aid received, by respondent demographics: 1995

	No employer aid	Employer paid*	Employer provided support
Total	42.9	23.9	33.3
Gender			
Male	40.4	27.0	32.6
Female	45.1	21.0	33.9
Race/ethnicity			
White, non-Hispanic	41.1	25.2	33.8
Black, non-Hispanic	49.4	23.3	27.3
Hispanic	53.7	14.1	32.2
American Indian/Alaskan Native	--	--	--
Asian/Pacific Islander	33.3	21.0	45.6
Other	43.3	15.4	41.3
Marital status			
Married	39.5	38.6	21.9
Separated	42.4	39.8	17.9
Divorced	45.2	30.5	24.3
Widowed	--	--	--
Never married	44.8	12.3	42.9
Age			
Less than 24	43.8	7.0	49.2
24-39	42.4	31.7	25.9
40-54	42.4	41.0	16.7
55-69	35.3	55.7	9.0
70 or more	--	--	--
Highest level of education completed			
Less than high school	57.8	23.2	19.1
High school diploma or equivalent	40.1	30.6	29.3
Some postsecondary education	43.6	16.3	40.1
Associate's degree	42.1	29.3	28.6
Bachelor's degree	43.7	29.0	27.3
Graduate degree	39.7	34.0	26.4
Number of household members under 18			
None	43.3	20.4	36.3
One	41.3	24.4	34.3
Two or more	43.1	33.5	23.3

Table 3—Percentage distribution of adults enrolled in credential programs who received employer aid* according to type of employer aid received, by respondent demographics: 1995--Continued

	No employer aid	Employer paid*	Employer provided support
Own or rent home, or other arrangement			
Own home	38.1	40.2	21.7
Rent home	45.7	15.7	38.6
Other arrangement	45.3	13.3	41.4
Language spoken most at home			
English	42.5	24.2	33.4
Spanish	60.9	8.2	30.9
Other language	47.7	20.4	32.0

‡Sample size is too small for a reliable estimate.

*Respondents who received cash assistance from their employer may or may not have received other forms of employer support.

NOTE: Percentages may not sum to 100 percent due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Fifty percent of the executive, administrative, and managerial employees received financial help from their employers if they enrolled in credential programs. Compared with them, those in marketing and sales (10 percent) and handlers, cleaners, helpers and laborers (4 percent) were less likely to have received financial help from their employers for credential programs.

Employers were more likely to help pay for credential programs for their employees in technological occupations. This may reflect the need of organizations to keep abreast of current technology. Seventy-two percent of the employees in engineering, surveying or architecture who enrolled in credential programs received financial help from their employers. This was at least double the rate of employer cash support for those in the following occupations: social scientist/worker, lawyer (25 percent); teacher, except postsecondary (24 percent); writer, artist, entertainer athlete (11 percent); health technologist (33 percent); technologist, not health (35 percent); marketing, sales (10 percent); administrative support (25 percent); service (17 percent); construction (32 percent); production (32 percent); transportation (19 percent); handler, cleaner, helper and laborer (4 percent); and those with multiple jobs/multiple occupations (18 percent).

Reasons for education

Respondents were more likely to report that their employers paid for their education if the employee's reason for taking some adult education was to improve his or her skills for the current job, than if this was not the reason. Forty-four percent of adults who enrolled in credential programs or took adult education to improve or advance in their jobs received financial support from their employer. This was at least 4 times more than the 10 percent of those who did not enroll in adult education for such a reason. Adults who enrolled in credential programs were less likely to have received employer financial aid if they enrolled to train for new jobs (12 percent) compared with those who did not enroll for this reason (34 percent).

Enrollment characteristics

Employers were more likely to pay for employees' full-time credential education if they were enrolled in programs for less than three months. Forty percent of respondents enrolled in credential programs full-time for less than three months received financial help from their employer. Eighteen percent of those enrolled between three and five months received employer help, as did 10 percent of those enrolled between six and eight months and 10 percent of those enrolled nine months or more. Traditional academic enrollment suggests that a full-time student would be enrolled for at least three months out of the year. When a full-time student was enrolled for less than three months, adults may have reported courses for updating professional certification or continuing education unit (CEU) classes as credential programs.

Adults enrolled in credential programs who sought associate's, bachelor's or doctoral degrees were less likely to receive employer financial aid (22, 14 and 17 percent) than the 37 percent enrolled in vocational/technical programs. This result should be interpreted with consideration for the possibility that the short credential programs may not qualify as accredited postsecondary programs.

Two reasons may explain these findings. First, a year-round, full-time education program may be a significant distraction from work. Enrolling full-time in a credential program is a major commitment and represents a potential loss of work time. Employers may have been more likely to pay for more focused employee training that required less time and minimized employee absence from work, rather than general education.

Second, those who enrolled as year-round, full-time students in longer credential programs may tend to be students who worked to meet expenses rather than employees who attended school. Since this distinction would suggest less attachment to work, employers may have been less willing to pay for these students' more general educational goals that may not be related to their jobs. This might explain why full-time students were less likely to receive employer financial aid benefits than were part-time students.

The fact that adults who paid more than $100 to enroll were less likely to have received employer financial aid for credential programs than those who paid nothing is consistent with the finding that those who paid higher tuition for full-time enrollment were less likely to receive help. Forty-five percent of adults who enrolled in credential programs and paid nothing out of their own pocket received help from their employer. Those paying an average price of attendance per class of more than $100 were less likely to have received employer help than those who paid nothing. One-third of those who paid between $100 and $499 received employer help, as did 23 percent of those paying between $500 and $999, 14 percent of those paying between $1,000 and $2,499, 9 percent of those paying between $2,500 and $4,999, and 10 percent of those paying $5,000 or more.

Table 4—Percentage distribution of adults enrolled in credential programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995

	No employer aid	Employer paid[1]	Employer provided support
Total	42.9	23.9	33.3
Annual personal earnings			
$20,000 or less	49.0	11.1	39.9
$20,001-$35,000	37.3	44.5	18.3
$35,001-$50,000	26.2	55.5	18.3
Over $50,000	29.4	57.6	13.1
Total household income			
$20,000 or less	46.0	10.4	43.6
$20,001-$35,000	46.4	22.2	31.4
$35,001-$50,000	39.2	31.0	29.7
Over $50,000	39.9	33.0	27.1

Table 4—Percentage distribution of adults enrolled in credential programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995--Continued

	No employer aid	Employer paid[1]	Employer provided support
Respondent's current occupation			
Executive, administrative, managerial	33.7	49.8	16.5
Engineer, surveyor, architect	20.5	72.2	7.3
Natural scientist, mathematician	26.8	53.2	20.0
Social scientist/worker, lawyer	50.4	24.7	25.0
Teacher, postsecondary	--	--	--
Teacher, except postsecondary	56.8	23.6	19.6
Physician, dentist, veterinarian	--	--	--
Registered nurse, pharmacist	30.3	45.2	24.4
Writer, artist, entertainer, athlete	57.5	10.6	31.9
Health technologist/technician	35.1	33.1	31.8
Technologist, not health	40.6	34.8	24.6
Marketing, sales	47.8	10.0	42.2
Administrative support	48.0	25.2	26.8
Service	42.3	16.7	41.0
Agriculture, forestry, fishing	--	--	--
Mechanic, repairer	27.8	53.2	19.0
Construction	40.7	32.1	27.3
Precision production	--	--	--
Production	52.3	32.2	15.5
Transportation, material moving	52.5	19.0	28.6
Handler, cleaner, helper, laborer	72.9	4.1	23.0
Other	37.7	35.2	27.0
Multiple jobs, multiple occupations	39.3	18.3	42.5
Industry of respondent's current job			
Agriculture, forestry, fishing	--	--	--
Mining	--	--	--
Construction	50.1	25.3	24.6
Manufacturing	42.9	43.0	14.1
Transportation, public utilities	41.6	43.8	14.6
Wholesale trade	44.5	23.0	32.5
Retail trade	48.0	6.5	45.6
Finance, insurance, real estate	41.9	38.6	19.5
Service	50.1	14.7	35.1
Health services	40.0	29.2	30.8
Education	45.8	30.1	24.1
Public administration	38.0	44.1	17.9
Other	42.8	41.6	15.7
Multiple jobs, multiple industries	35.6	18.2	46.2

Table 4—Percentage distribution of adults enrolled in credential programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995--Continued

	No employer aid	Employer paid[1]	Employer provided support
Employer provided any employee benefits[2]			
Employer did provide employee benefits	38.7	36.8	24.5
Employer did not provide employee benefits	48.8	3.5	47.8
Number of credential programs participated in			
One	44.3	22.9	32.8
More than one	30.0	32.2	37.8
Respondent average cost for credential programs			
None	30.8	45.4	23.8
Less than $100	37.5	47.3	15.2
$100-$499	45.3	33.1	21.7
$500-$999	48.7	22.8	28.4
$1,000-$2,499	44.9	14.1	41.0
$2,500-$4,999	44.6	8.6	46.8
$5,000 or more	43.1	9.7	47.2
Respondent total cost for credential programs			
None	30.8	45.4	23.8
Less than $100	37.9	46.5	15.6
$100-$499	45.3	33.5	21.2
$500-$999	50.1	22.4	27.5
$1,000-$2,499	45.0	16.7	38.3
$2,500-$4,999	44.5	11.5	44.0
$5,000 or more	42.2	10.3	47.6
Took adult education for personal reasons			
Took adult education for personal reasons	44.6	22.7	32.7
Did not take adult education for personal reasons	42.1	24.4	33.5
Took adult education to improve basic skills			
Took adult education to improve basic skills	52.9	19.4	27.8
Did not take adult education to improve basic skills	42.8	23.9	33.3
Took adult education to improve or advance in job			
Took adult education to advance in job	36.0	44.1	19.9
Did not take adult education to advance in job	47.5	10.2	42.3
Took adult education to meet requirements			
Took adult education to meet requirements	40.9	17.1	42.1
Did not take adult education to meet requirements	43.4	25.7	30.9

Table 4—Percentage distribution of adults enrolled in credential programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995--Continued

	No employer aid	Employer paid[1]	Employer provided support
Took adult education to train for new job			
Took adult education to train for new job	49.3	11.8	38.9
Did not take adult education to train for new job	37.6	33.7	28.7
Highest level of credential program enrolled in			
Vocational/technical certificate	44.1	37.1	18.9
Associate's degree	44.8	21.8	33.4
Bachelor's degree	43.1	14.3	42.6
Master's degree	40.6	35.4	24.0
Doctoral degree	32.5	17.0	50.5
First-professional degree	42.9	24.1	33.0
Other	41.8	41.0	17.2
Type of institution offering program			
Primary/secondary school	57.2	27.2	15.6
2-year community or junior college	50.3	17.7	32.0
2-year vocational or technical school	57.4	22.8	19.9
4-year college or university	42.0	19.4	38.6
Private vocational or trade school	59.9	12.4	27.7
Business, industry	10.0	76.1	13.9
Professional association	9.7	85.0	5.3
Other	26.2	52.1	21.7
Multiple	23.0	46.3	30.7
Major, highest level credential program			
Humanities	47.8	12.3	39.9
Social, behavioral science	40.5	7.5	52.0
Life science, physical science	29.1	19.8	51.1
Mathematics	41.5	31.5	27.0
Computer, information science	33.0	36.1	30.9
Engineering	47.0	16.6	36.5
Education	44.1	32.2	23.7
Business, management	46.8	15.6	37.6
Health	39.5	39.2	21.3
Vocational, technical	44.5	14.1	41.4
Other	--	--	--
Average hours in class per week for full-time credential programs[1]			
Less than three	40.4	38.5	21.1
Three to six	35.3	31.7	33.1
More than six	44.2	10.7	45.0

Table 4—Percentage distribution of adults enrolled in credential programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995--Continued

	No employer aid	Employer paid[1]	Employer provided support
Average hours in class per week for part-time credential programs[4]			
Less than four	38.5	44.3	17.2
Four to six	43.5	34.3	22.2
More than six	39.3	32.9	27.9
Average months in class for full-time credential programs[3]			
Less than three	42.9	40.1	17.0
Three to five	42.3	17.6	40.1
Six to eight	47.6	9.6	42.8
Nine to twelve	40.3	9.9	49.8
Average months in class for part-time credential programs[4]			
Less than three	43.4	16.1	40.6
Three to five	43.1	32.0	25.0
Six to eight	41.3	40.0	18.7
Nine to twelve	41.2	40.7	18.1
Credential program part of assistantship or fellowship			
Part of assistantship or fellowship	--	1.7	98.3
Not part of assistantship or fellowship	--	37.1	62.9
Employer required credential program[2]			
Employer required credential program	20.0	65.0	15.0
Employer did not require credential program	40.6	25.7	33.7
Employer aid provided for credential program part of union contract[2]			
Aid part of union contract	(5)	79.7	20.3
Aid not part of union contract	(5)	46.2	53.9

Table 4—Percentage distribution of adults enrolled in credential programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995--Continued

	No employer aid	Employer paid[1]	Employer provided support
Number of courses			
One	44.4	38.7	17.0
Two	41.9	39.1	19.1
More than two	42.7	17.7	39.7

--Sample size is too small for a reliable estimate.

[1]Respondents who received cash assistance from their employer may or may not have received other forms of employer support.
[2]Includes only employed respondents.
[3]Includes only respondents who participated in full-time credential programs.
[4]Includes only respondents who participated in part-time credential programs.
[5]Not applicable. This variable applies only to respondents who received employer aid.

NOTE: Percentages may not sum to 100 percent due to rounding. Total is not within the range of some of the subgroup estimates due to the number of observations with missing values within the subgroups.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

The relationship between employment and enrollment status, and employer financial aid

Categorizing adults by whether they worked full- or part-time and whether they enrolled in credential programs full- or part-time provided the ability to further analyze who was most likely to receive employer financial aid. So few adults did not work that it was not possible to report non-working adults as a separate category. These non-working adults are included in the tables, except where it has been noted that specific variables apply to employed respondents only. The evidence suggests that adults participating in credential programs who worked full-time were more likely to receive employer financial aid than were those who worked part-time (37 percent versus 7 percent; table 5). Thirteen percent of those who were enrolled in credential programs part-time and worked less than 30 hours per week (part-time) received employer financial aid compared with 44 percent of those who worked 30 hours or more a week (full-time). Full-time employees were also more likely than part-time employees to have received employer financial aid if they enrolled in credential programs full-time (26 percent compared with 5 percent).

Table 5—Percentage distribution of adults who participated in credential programs according to type of employer aid[1] received, by enrollment status and hours worked per week: 1995

	No employer aid	Employer paid[1]	Employer provided support
	Participated in credential program		
Total	42.9	23.9	33.3
Hours worked per week[2]			
One to thirty	43.2	6.5	50.3
More than thirty	40.5	37.2	22.3
	Participated in credential program full-time[3]		
Total	43.1	13.7	43.2
Hours worked per week[2]			
One to thirty	41.3	4.6	54.1
More than thirty	41.0	26.1	32.8
	Participated in credential program part-time[4]		
Total	40.7	36.3	23.0
Hours worked per week[2]			
One to thirty	44.4	12.6	43.0
More than thirty	38.8	43.9	17.3

NOTE: Percentages may not sum to 100 percent due to rounding.

[1]Respondents who received cash assistance from their employer may or may not have received other forms of employer support.
[2]Includes only employed respondents.
[3]A value greater than zero for the "credential programs: average months, full-time" variable was used to determine full-time participation in credential programs.
[4]A value greater than zero for the "credential programs: average months, part-time" variable was used to determine part-time participation in credential programs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Employer support could have included allowance for time off or a flexible work schedule that permitted employees to take classes. This may help explain the large share of part-time employees who received other employer-provided support if they enrolled in credential programs. Over one-half (54 percent) of the adults who worked part-time while enrolled full-time in credential programs received other support from their employers. This compares to 33

percent who received employer financial aid by those who worked full-time and enrolled in credential programs full-time. Forty-three percent of those who worked part-time and attended credential programs part-time received employer support. That compares to 17 percent of the full-time workers who received employer support when they enrolled in credential programs part-time.

Work-related programs

Employers generally paid the educational expenses of employees enrolled in work-related programs that did not award academic credits. Among adults participating in work-related programs, 88 percent of them received employer cash assistance and 12 percent received some other type of support (table 6). All adults enrolled in work-related programs received some form of employer support; thus, there is no column for "no support" included on table 6.

Older adults who participated in work-related programs were more likely to receive cash assistance from their employers than were the youngest. Seventy-four percent of adults less than 24 who reported taking work-related programs received employer cash support compared with 89 percent of those between 24 and 39 years old and 40 to 54 years old. Ninety percent of those between 55 and 69 years of age received employer support if they took work-related programs.

Employers paid for work-related programs for 90 percent of the adults who owned their homes, compared with 84 percent of those who rented their homes. Further, 82 percent of the adults who earned less than $20,000 in personal annual income received cash support from their employers for work-related program participation (table 7). That was less than those who earned more than $20,000 (89, 93, and 92 percent respectively for progressively higher income levels).

Adults who participated in adult education to improve job skills or advance in their jobs and enrolled in work-related programs were more likely to receive employer support, 91 percent, than the 69 percent who received help while enrolling in adult education for other purposes. Those who indicated that they did not enroll in adult education to prepare for new jobs were more likely to receive employer support (90 percent) than were those who did (72 percent).

Table 6—Percentage distribution of adults enrolled in work-related programs who received employer aid* according to type of employer aid received, by respondent demographics: 1995

	Employer paid*	Employer provided other support
Total	87.9	12.1
Gender		
Male	88.7	11.3
Female	87.2	12.8
Race/ethnicity		
White, non-Hispanic	88.3	11.7
Black, non-Hispanic	87.4	12.6
Hispanic	84.6	15.4
American Indian/Alaskan Native	89.3	10.7
Asian/Pacific Islander	85.2	14.8
Other	85.0	15.0
Marital status		
Married	90.1	9.9
Separated	90.1	9.9
Divorced	83.4	16.6
Widowed	93.0	7.0
Never married	82.5	17.5
Age		
Less than 24	73.9	26.1
24-39	88.9	11.1
40-54	88.7	11.3
55-69	89.5	10.5
70 or more	--	--
Highest level of education completed		
Less than high school	76.9	23.1
High school diploma or equivalent	90.4	9.6
Some postsecondary education	87.0	13.0
Associate's degree	90.5	9.5
Bachelor's degree	88.3	11.7
Graduate degree	87.5	12.5
Number of household members under 18		
None	87.0	13.0
One	88.5	11.5
Two or more	89.2	10.8

Table 6—Percentage distribution of adults enrolled in work-related programs who received employer aid* according to type of employer aid received, by respondent demographics: 1995--Continued

	Employer paid*	Employer provided other support
Own or rent home, or other arrangement		
Own home	90.3	9.7
Rent home	84.0	16.0
Other arrangement	78.7	21.3
Language spoken most at home		
English	88.2	11.8
Spanish	78.3	21.7
Other language	76.3	23.7

--Sample size too small for a reliable estimate.

*Respondents who received cash assistance from their employer may or may not have received other forms of employer support.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Employees who worked for companies that did not provide other employee benefits were less likely to receive cash support if they participated in work-related programs. About two-thirds (67 percent) of the adults who worked for organizations that did not have employee benefits received cash support from their employers if they took work-related programs. That compared with 91 percent of those who received cash support for work-related programs if they worked for employers who did provide employee benefits.

It was rare for employers to require employees to participate in work-related programs and not pay for it; however, if the training was not required, employers were less likely to pay. Ninety-three percent of adults whose employers required them to participate in work-related programs received employer support compared with 82 percent of those whose employers did not require them to participate.

Table 7—Percentage distribution of adults enrolled in work-related programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995

	Employer paid[1]	Employer provided other support
Total	87.9	12.1
Annual personal earnings		
$20,000 or less	82.2	17.8
$20,001-$35,000	89.2	10.8
$35,001-$50,000	92.7	7.3
Over $50,000	92.2	7.8
Total household income		
$20,000 or less	76.2	23.8
$20,001-$35,000	88.4	11.6
$35,001-$50,000	87.9	12.1
Over $50,000	90.5	9.5
Respondent's current occupation		
Executive, administrative, managerial	93.4	6.6
Engineer, surveyor, architect	94.8	5.2
Natural scientist, mathematician	96.3	3.7
Social scientist/worker, lawyer	88.8	11.2
Teacher, postsecondary	83.7	16.3
Teacher, except postsecondary	82.2	17.8
Physician, dentist, veterinarian	64.6	35.4
Registered nurse, pharmacist	84.6	15.4
Writer, artist, entertainer, athlete	76.9	23.1
Health technologist/technician	82.1	17.9
Technologist, not health	92.1	7.9
Marketing, sales	90.1	9.9
Administrative support	92.0	8.0
Service	83.2	16.8
Agriculture, forestry, fishing	--	--
Mechanic, repairer	94.4	5.6
Construction	79.1	20.9
Precision production	88.5	11.5
Production	95.9	4.1
Transportation, material moving	82.1	17.9
Handler, cleaner, helper, laborer	--	--
Other	92.6	7.4
Multiple jobs, multiple occupations	79.8	20.2

Table 7—Percentage distribution of adults enrolled in work-related programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995--Continued

	Employer paid[1]	Employer provided other support
Industry of respondent's current job		
Agriculture, forestry, fishing	83.4	16.6
Mining	--	--
Construction	78.1	21.9
Manufacturing	94.6	5.4
Transportation, public utilities	94.2	5.8
Wholesale trade	100.0	--
Retail trade	84.4	15.6
Finance, insurance, real estate	90.3	9.7
Service	85.3	14.7
Health services	85.2	14.8
Education	83.8	16.2
Public administration	95.9	4.1
Other	95.7	4.3
Multiple jobs, multiple industries	79.8	20.2
Employer provided any employee benefits[2]		
Employer did provide employee benefits	90.5	9.5
Employer did not provide employee benefits	67.0	33.0
Respondent average cost for work-related classes		
None	96.7	3.3
Less than $100	83.2	16.8
$100-$499	65.3	34.7
$500-$999	54.0	46.0
$1,000-$4,999	47.2	52.8
$5,000 or more	--	--
Took adult education for personal reasons		
Took adult education for personal reasons	87.9	12.1
Did not take adult education for personal reasons	88.0	12.0
Took adult education to improve basic skills		
Took adult education to improve basic skills	--	--
Did not take adult education to improve basic skills	88.0	12.0
Took adult education to improve or advance in job		
Took adult education to improve or advance in job	90.7	9.3
Did not take adult education to improve or advance in job	68.9	31.1
Took adult education to meet requirements		
Took adult education to meet requirements	78.1	21.9
Did not take adult education to meet requirements	89.1	10.9

Table 7—Percentage distribution of adults enrolled in work-related programs who received employer aid[1] according to type of employer aid received, by employment and adult education characteristics: 1995--Continued

	Employer paid[1]	Employer provided other support
Took adult education to train for new job		
Took adult education to train for new job	72.3	27.7
Did not take adult education to train for new job	89.8	10.2
Average hours in class per week for work-related classes		
Less than four	76.9	23.1
Four to eight	84.2	15.8
More than eight	88.7	11.3
Average weeks in class for work-related classes		
One	90.9	9.1
Two	91.5	8.5
Three to five	89.6	10.4
More than five	72.6	27.4
Employer required work-related class[2]		
Employer did require work-related class	93.4	6.6
Employer did not require work-related class	81.9	18.1
Employer aid provided for work-related course as part of union contract[3]		
Employer aid provided as part of union contract	94.3	5.7
Employer aid not provided as part of union contract	92.8	7.2
Number of courses taken		
One	80.8	19.2
Two to five	91.8	8.2
More than five	93.9	6.1

--Sample size too small for a reliable estimate.

[1]Respondents who received cash assistance from their employer may or may not have received other forms of employer support.
[2]Includes only employed respondents.
[3]Includes only employed respondents who received employer aid.

NOTE: Total is not within the range of some of the subgroup estimates due to the number of observations with missing values within the subgroups.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Other structured programs

The questions about other structured programs were asked slightly differently than those asked in the other educational sections. The NHES survey only asked whether the adult received any support or no support from his or her employer for the other structured program. The support could have been instruction, cash, or any other form of assistance. Thus, table 8 displays whether the adult received any form of employer assistance if he or she enrolled in a formal education or training program that did not fit into another category and could be called "other structured program." Thirty percent of adults who participated in other structured programs received support from their employers while 70 percent received no support.

The theme of employers supporting education and training for older, more established adults was also found for those who enrolled in other structured programs. The results indicate that each of the following characteristics were associated with receipt of employer financial aid: age, marital status and family incomes. Again, employers were more likely to support participation in other structured programs if the adults' reason for enrolling was to improve or advance in their jobs rather than for other reasons.

Twenty percent of adults less than 24 years old received employer support if they participated in other structured programs compared with 29 percent of those 25 to 39 years old and 36 percent of those 40 to 54 years old. In addition, married adults were more likely to receive employer support for participation in other structured programs than those never married, 32 compared with 22 percent. Finally, adults whose household incomes were less than $20,000 were less likely to receive employer financial aid for other structured programs (24 percent) than those with household incomes $35,001 to $50,000 (33 percent; table 9).

As previously stated, females were more likely than males to participate in other structured programs; however, males were more likely to receive employer support than females for participation in other structured programs, 34 compared with 27 percent (table 8). The data do not suggest any reason for this outcome. It may be that females had greater inclinations to enroll in courses related to their personal interests than did males. Alternatively, perhaps women may have been less likely to work for employers who provided any type of educational support.

Table 8—Percentage distribution of adults enrolled in other structured programs according to employer support, by respondent demographics: 1995

	No employer support	Employer provided support
Total	70.2	29.8
Gender		
Male	65.9	34.1
Female	73.2	26.8
Race/ethnicity		
White, non-Hispanic	69.9	30.1
Black, non-Hispanic	70.5	29.6
Hispanic	74.2	25.8
American Indian/Alaskan Native	--	--
Asian/Pacific Islander	63.6	36.4
Other	72.0	28.0
Marital status		
Married	68.1	31.9
Separated	73.3	26.7
Divorced	63.0	37.0
Widowed	79.3	20.7
Never married	77.6	22.4
Age		
Less than 24	80.1	20.0
24-39	70.7	29.3
40-54	63.7	36.4
55-69	74.9	25.1
70 or more	--	--
Highest level of education completed		
Less than high school	72.8	27.2
High school diploma or equivalent	67.4	32.6
Some postsecondary education	72.2	27.8
Associate's degree	64.2	35.8
Bachelor's degree	71.1	28.9
Graduate degree	71.5	28.5
Number of household members under 18		
None	70.5	29.5
One	71.7	28.3
Two or more	68.3	31.7

Table 8—Percentage distribution of adults enrolled in other structured programs according to employer support, by respondent demographics: 1995--Continued

	No employer support	Employer provided support
Own or rent home, or other arrangement		
Own home	68.8	31.2
Rent home	72.1	27.9
Other arrangement	72.9	27.1
Language spoken most at home		
English	70.0	30.0
Spanish	75.9	24.1
Other language	77.6	22.4

--Sample size is too small for a reliable estimate.

NOTE: Percentage may not sum to 100 percent due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

Eighteen percent of adults in other structured programs who enrolled in adult education for personal reasons received employer support, compared with 68 percent of those who did not enroll for personal reasons (table 9). Conversely, 45 percent of those who enrolled to improve or advance in their jobs received employer support compared with 15 percent of those whose reason for enrolling was not to improve or advance in their jobs.

Those employees who worked for an employer that provided employee benefits were more likely to receive support from their employer if they participated in other structured programs compared with those employees who worked for organizations that did not provide employee benefits (34 percent compared with 19 percent).

Most other structured programs were short. Fifty-two percent of those who participated for a week received support from their employers. The share dropped to 27 percent for those in a program for two to five weeks and 17 percent for those in programs for five weeks or more.

Table 9—Percentage distribution of adults enrolled in other structured programs according to employer support, by employment and adult education characteristics: 1995

	No employer support	Employer provided support
Total	70.2	29.8
Annual personal earnings		
$20,000 or less	73.4	26.6
$20,001-$35,000	67.5	32.5
$35,001-$50,000	65.4	34.6
Over $50,000	64.6	35.4
Total household income		
$20,000 or less	76.0	24.0
$20,001-$35,000	69.6	30.4
$35,001-$50,000	67.4	32.6
Over $50,000	69.4	30.6
Respondent's current occupation		
Executive, administrative, managerial	70.8	29.2
Engineer, surveyor, architect	70.0	30.0
Natural scientist, mathematician	59.1	40.9
Social scientist/worker, lawyer	63.2	36.8
Teacher, postsecondary	73.2	26.8
Teacher, except postsecondary	62.2	37.8
Physician, dentist, veterinarian	--	--
Registered nurse, pharmacist	66.5	33.5
Writer, artist, entertainer, athlete	72.9	27.1
Health technologist/technician	64.6	35.4
Technologist, not health	68.4	31.6
Marketing, sales	86.6	13.4
Administrative support	76.6	23.4
Service	65.3	34.7
Agriculture, forestry, fishing	--	--
Mechanic, repairer	46.5	53.5
Construction	57.6	42.4
Precision production	60.8	39.2
Production	68.9	31.1
Transportation, material moving	62.2	37.8
Handler, cleaner, helper, laborer	--	--
Other	78.0	22.0
Multiple jobs, multiple occupations	67.8	32.2

Table 9—Percentage distribution of adults enrolled in other structured programs according to employer support, by employment and adult education characteristics: 1995--Continued

	No employer support	Employer provided support
Industry of respondent's current job		
Agriculture, forestry, fishing	44.8	55.2
Mining	--	--
Construction	62.8	37.2
Manufacturing	71.4	28.6
Transportation, public utilities	63.0	37.0
Wholesale trade	84.7	15.3
Retail trade	87.8	12.2
Finance, insurance, real estate	78.6	21.4
Service	74.5	25.5
Health services	65.5	34.5
Education	61.6	38.4
Public administration	57.7	42.3
Other	77.3	22.7
Multiple jobs, multiple industries	66.4	33.6
Employer provided any employee benefits*		
Employer did provide employee benefits	66.4	33.6
Employer did not provide employee benefits	80.8	19.2
Respondent average cost for other structured programs		
None	50.8	49.2
Less than $100	78.4	21.6
$100-$499	84.5	15.5
$500-$999	88.9	11.1
$1,000-$2,499	80.4	19.6
$2,500 or more	--	--
Respondent total cost for other structured programs		
None	50.8	49.2
Less than $100	78.5	21.5
$100-$499	84.2	15.8
$500-$999	83.0	17.0
$1,000-$2,499	77.1	22.9
$2,500 or more	83.5	16.5
Took adult education for personal reasons		
Took adult education for personal reasons	82.4	17.6
Did not take adult education for personal reasons	32.4	67.6
Took adult education to improve basic skills		
Took adult education to improve basic skills	--	--
Did not take adult education to improve basic skills	70.1	29.9

Table 9—Percentage distribution of adults enrolled in other structured programs according to employer support, by employment and adult education characteristics: 1995--Continued

	No employer support	Employer provided support
Took adult education to improve or advance in job		
Took adult education to improve or advance in job	54.7	45.3
Did not take adult education to improve or advance in job	85.5	14.5
Took adult education to meet requirements		
Took adult education to meet requirements	66.3	33.7
Did not take adult education to meet requirements	70.6	29.4
Took adult education to train for new job		
Took adult education to train for new job	75.1	24.9
Did not take adult education to train for new job	69.4	30.6
Average hours per week for other structured programs		
Less than four	59.6	40.4
Four to six	56.8	43.2
More than six	73.0	27.0
Average weeks in class for other structured programs		
One	47.7	52.3
Two to five	73.4	26.6
More than five	83.2	16.8
Type of institution offering program		
Primary/secondary school	70.1	29.9
College or university	72.9	27.1
Other	69.5	30.5
Number of other structured programs participated in		
One	73.8	26.2
Two	64.5	35.5
Three or more	64.8	35.2

--Sample size is too small for a reliable estimate.

*Includes only employed respondents.

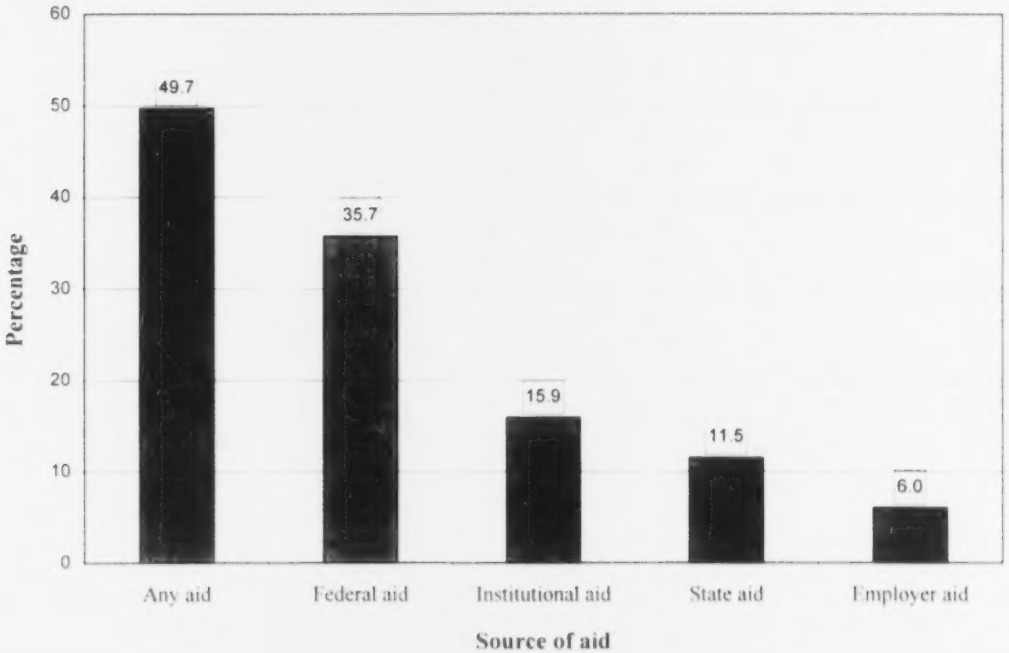
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

RESULTS FROM NPSAS

This section provides results from the NPSAS data. These data provided detailed information describing employer support of students enrolled in accredited postsecondary institutions. NPSAS provided information on the characteristics of those who received employer financial aid, and the average amount of cash assistance employer aid recipients received. In addition, the data provide details about institutional characteristics, cost of education and other sources of financial support. The results from NPSAS are not directly comparable to the NHES results. The NPSAS definition of credential program only includes information about programs provided by accredited postsecondary institutions instead of the broader definition implicit in the NHES results.

Figure 5 shows that financial aid provided by employers helped 6 percent of undergraduates. Undergraduates were more likely to receive federal, institutional, or state aid than employer financial aid: 36 percent received federal aid, 16 percent received institutional aid, and 12 percent received state aid. By this measure, employer financial aid was a minor source of aid for undergraduates. As will be seen later, employers were an important source of aid for undergraduates who were taking classes while working full-time.

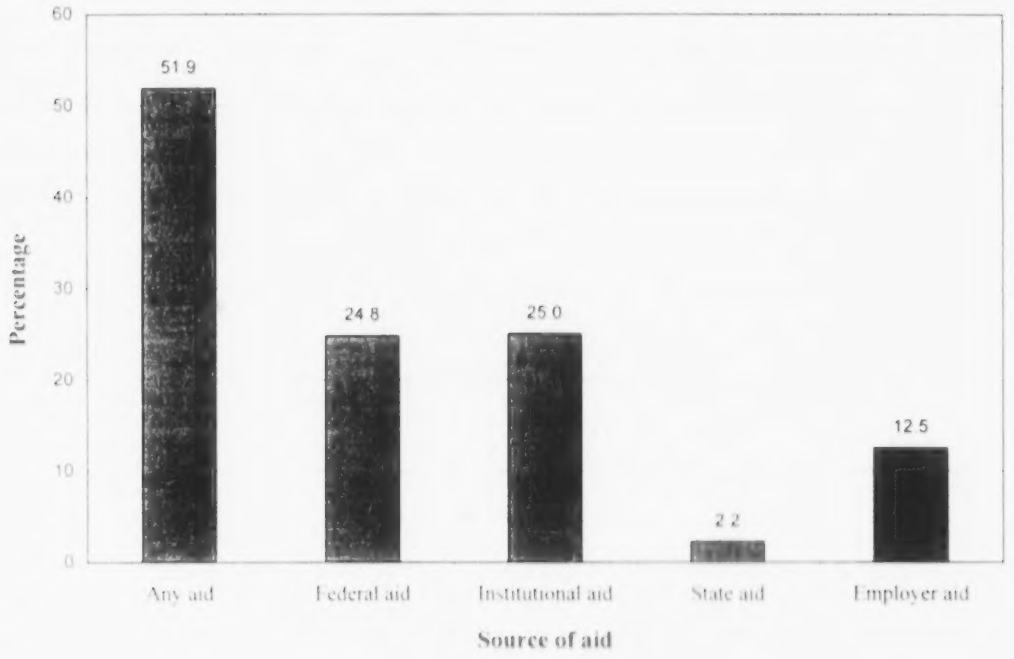
Figure 5—Percentage of undergraduates who received any aid, federal aid, institutional aid, state aid and employer financial aid: 1995-96



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

Employers also helped graduate and first-professional students pay for their education. Thirteen percent of graduate and first-professional students received employer financial aid (figure 6). Due to differences in how graduate and first-professional students pay for their education, data are collected differently and their results are reported separately from undergraduates.

Figure 6—Percentage of graduate and first-professional students who received any aid, federal aid, institutional aid, state aid and employer financial aid: 1995-96



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Graduate and First-Professional Data Analysis System.

UNDERGRADUATES

Employed undergraduates' primary roles

NPSAS differentiates students who worked to pay for education from employees who took classes. Thirty-six percent of the undergraduates considered themselves primarily employees who were enrolled in school, and 64 percent said they were primarily students who worked to meet expenses (table 10). This was an important distinction when analyzing who received employer financial aid.

The student's primary role while employed and enrolled was a predictor of employer financial aid receipt. Twenty-five percent of the employed undergraduates who considered

themselves primarily employees received employer financial aid. Four percent of those who identified themselves as students who worked to meet expenses received employer financial aid. Because so few respondents who were primarily students who worked received employer financial aid, they were not analyzed further in this report. Those who were primarily employees who went to school are designated in this report as undergraduate employees.

Table 10—Percentage distribution of undergraduate employees* and percentage of undergraduate employees who received employer financial aid by primary role while enrolled and working: 1995-96

	All undergraduate employees	Received employer financial aid
Total	100.0	6.0
Primary role while enrolled and working		
Student worked to meet expenses	63.7	4.3
Employee decided to enroll in school	36.3	24.9

*Undergraduate employees are employed undergraduates who considered themselves primarily employees who enrolled in school, about 36 percent of all employed undergraduates.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

Characteristics of undergraduate employees

Twenty-five percent of undergraduates who identified themselves as primarily employees who enrolled (undergraduate employees) received employer financial aid (table 11). The results suggest that compared with other undergraduate employees, those who were independent, married, older, had higher income, were full-time employees, and enrolled part-time were more likely to receive employer financial aid. Undergraduates who attended private, not-for-profit institutions, as well as those who attended 4-year institutions were more likely to receive employer financial aid than were those who attended other types or levels of institutions.

Independent undergraduate employees were more likely to receive employer financial aid than those who were dependent, 29 percent compared with 5 percent (table 11). Thirty-four percent of married undergraduate employees received employer financial aid, compared with 19 percent who were not married. Further, 31 percent of undergraduate employees 24 or older received employer financial aid, compared with 6 percent of those less than 24.

Receipt of employer financial aid was associated with the type and control of the institution attended by the undergraduate employee. Forty-six percent of undergraduate

employees who attended private, not-for-profit institutions received employer financial aid compared with 23 percent for those who attended public institutions, while 11 percent of undergraduate employees who attended private, for-profit institutions received employer financial aid compared with 46 percent of those who attended private, not-for-profit institutions. Thirty-five percent of undergraduate employees who attended 4-year institutions received employer financial aid, compared with 22 percent of those in 2-year, and 8 percent of those in less-than-2-year institutions. Undergraduate employees who were enrolled in institutions offering bachelor's degrees were more likely to receive employer financial aid (33 percent) than were those who enrolled in institutions offering certificates or other formal awards (17 percent), or associate's degrees (25 percent).

Undergraduate employees who worked every week while enrolled were three times as likely to receive employer financial aid as those who worked less than one-half of the weeks while they were enrolled, 27 percent compared with 8 percent. Further, 28 percent of those who worked 30 or more hours a week received employer financial aid compared with 8 percent of those who worked less than 30 hours a week (part-time). Finally, 16 percent of undergraduate employees who attended school full-time received employer financial aid while 28 percent of those who attended part-time received employer financial aid. The results suggest that those who worked full-time were more likely to have received employer financial aid than were those working part-time.

The results also indicate that undergraduate employees who enrolled in business programs were more likely to receive employer financial aid than were those who enrolled in humanities, social and behavioral sciences, life sciences and education. At least twice as many undergraduate employees enrolled in the business programs, 35 percent, received employer financial aid compared with those in humanities, social/behavioral sciences and education (15 percent for each), and in life sciences (14 percent). {t=5.55, 4.37, 4.31, 4.23}

Grade point average (GPA) was associated with receipt of employer financial aid. Undergraduate employees with higher GPAs were more likely to receive employer financial aid than were those with lower GPAs. Ten percent of undergraduate employees who attained GPAs of less than 2.00 received employer financial aid compared with 25 percent of those with GPAs between 2.00 and 3.49, and 33 percent of those with GPAs of 3.50 or higher.

Another characteristic that differentiated undergraduate employees who received employer financial aid from those who did not was employment in technical occupations. Undergraduate employees in technical occupations were more likely to receive employer financial aid than were those in clerical or service occupations (41 percent compared with 21 and 16 percent).

Undergraduate employees who received aid from some other sources were less likely to receive employer financial aid than were those who did not receive aid from other sources. Eight percent of undergraduate employees who received federal aid also received employer financial aid compared with 29 percent who did not receive federal aid. Eight percent of those who received state aid received employer financial aid compared with 26 percent who did not receive state aid. One of three situations may explain these results. First, undergraduate employees who did not receive employer financial aid benefits may have had to turn to other sources for financial aid. Second, the employer may have paid enough of the educational expenses for the employee that the employee may not have needed other sources of aid. Third, employer financial aid recipients may not have qualified for need-based aid from government sources.

Table 11—Percentage of undergraduate employees* who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96

	Received employer financial aid	Average employer financial aid received
Total	24.9	$932
Degree program during first term		
Certificate or award	18.2	850
Associate's degree	23.0	490
Bachelor's degree	33.8	1,890
Undergraduate, non-degree program	28.8	359

Table 11—Percentage of undergraduate employees* who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96--Continued

	Received employer financial aid	Average employer financial aid received
Undergraduate field of study		
Humanities	14.6	875
Social, behavioral sciences	15.1	1,399
Life sciences	14.2	--
Physical sciences	--	--
Mathematics	--	--
Computer, information science	35.9	1,194
Engineering	34.7	806
Education	14.7	--
Business, management	34.9	1,239
Health	23.9	1,134
Vocational, technical	21.2	--
Other technical, professional	18.9	666
Dependency status		
Dependent	5.2	968
Independent	29.2	930
Gender		
Male	24.7	900
Female	25.1	956
Marital status		
Not married	18.9	891
Married	34.0	958
Separated	12.8	--
Race/ethnicity		
White, non-Hispanic	27.2	916
Black, non-Hispanic	23.3	1,042
Hispanic	17.7	720
Asian/Pacific Islander	6.0	--
American Indian/Alaskan Native	6.3	--
Other	--	--
Age		
Less than 24	6.3	935
24 or older	30.6	932
Income percentile		
1st-25th percentile	10.6	506
26th-50th percentile	10.8	599
51st-75th percentile	27.5	783
76th-100th percentile	35.0	1,118

Table 11—Percentage of undergraduate employees* who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96--Continued

	Received employer financial aid	Average employer financial aid received
Income and dependency level		
Dependent		
Less than $20,000	6.4	--
$20,000-$29,999	1.5	--
$30,000-$39,999	1.9	--
$40,000-$49,999	4.3	--
$50,000-$59,999	11.6	--
$60,000-$69,999	5.0	--
$70,000 or more	5.1	--
Independent		
Less than $10,000	13.0	572
$10,000-$19,999	16.0	624
$20,000-$29,999	30.6	727
$30,000 or more	36.8	1,060
Single parent, independent students only		
Respondent was a single parent	26.4	896
Respondent was not a single parent	24.6	939
Federal aid (except VA/DOD)		
Did receive federal aid	8.4	1,382
Did not receive federal aid	28.6	,902
Institutional aid		
Did receive institutional aid	30.0	1,356
Did not receive institutional aid	24.6	895
State aid		
Did receive state aid	7.7	1,410
Did not receive state aid	25.8	925
Highest level offering		
Certificate or other formal award	17.2	530
Associate's degree	24.9	431
Bachelor's degree	33.0	1,165
Master's degree or equivalent	36.4	1,905
Doctoral degree	31.9	1,617
First-professional degree	--	--
Grade point average		
Less than 2.00	10.1	619
2.00-3.49	24.5	937
3.50 or higher	33.4	832

Table 11—Percentage of undergraduate employees* who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96--Continued

	Received employer financial aid	Average employer financial aid received
Occupation		
Clerical	21.0	917
Manager	29.8	1,211
Professional	29.5	924
Technical	40.6	1,065
Service	15.5	589
Sales	19.7	1,294
Proprietor	21.0	--
Skilled laborer	20.5	919
Military	41.8	975
Homemaker	--	--
Other	22.7	623
Not working	32.9	--
Principal job related to major		
Job related to major	37.5	882
Job not related to major	13.9	1,063
Institutional control		
Public	23.0	510
Private, not-for-profit	45.6	2,321
Private, for-profit	10.9	2,704
Weeks employed while enrolled		
Worked every week while enrolled	26.7	936
Worked most of the weeks while enrolled	14.5	745
Worked about half of the weeks while enrolled	21.9	--
Worked less than half of the weeks while enrolled	7.9	--
Tuition and fees for terms attended		
Less than $1,000	24.5	432
$1,000-$2,499	25.6	1,399
$2,500-$4,999	30.5	2,781
$5,000-$7,499	23.3	3,437
$7,500-$9,999	15.4	--
$10,000 or more	26.8	--
Average hours worked per week while enrolled		
Less than 30	7.5	852
30 or more	28.2	936

Table 11—Percentage of undergraduate employees* who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96--Continued

	Received employer financial aid	Average employer financial aid received
Institution enrollment		
Less than 1,000	12.3	1,262
1,000-2,499	31.0	1,722
2,500-4,999	36.4	1,201
5,000-7,499	27.0	693
7,500-9,999	29.1	725
10,000 or more	22.7	761
Undergraduate class level		
First year/freshman	20.4	658
Second year/sophomore	31.9	759
Third year/junior	31.3	2,016
Fourth year or more/senior	35.8	2,051
Attendance intensity		
Full-time	15.8	1,569
Part-time	28.0	816
Level of institution		
Less-than-2-year	7.6	1,691
2-year	22.1	425
4-year	34.5	1,694

--Sample size too small for a reliable estimate.

*Undergraduate employees are employed undergraduates who considered themselves primarily employees who enrolled in school, about 36 percent of all employed undergraduates.

NOTE: Total is not within the range of some of the subgroup estimates due to the number of observations with missing values within the subgroup.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

Table 12 shows that two-thirds of undergraduate employees enrolled in public, 2-year or less institutions. Seventeen percent of undergraduates attended public, 4-year, institutions, and 10 percent attended private, not-for-profit, 4-year institutions.

Sixty percent of the undergraduate employees who received employer financial aid attended public, 2-year or less institutions, compared with 69 percent of those who did not receive employer financial aid. Nineteen percent of the undergraduate employees who received employer financial aid attended private, not-for-profit, 4-year institutions compared with 7

percent of those who did not receive employer financial aid. Two percent of undergraduate employees who received employer financial aid attended private, for-profit institutions, while 6 percent of those who did not receive employer financial aid attended private, for-profit institutions.

Table 12—Percentage distribution of undergraduate employees* according to institution type, by employer financial aid receipt: 1995-96

	Public, 2-year or less	Public, 4-year	Private, not-for-profit, less-than-4-year	Private, not-for-profit, 4-year	Private, for-profit
Total	66.7	16.9	1.4	9.8	5.3
Employer financial aid					
Did receive employer financial aid	60.3	16.9	1.1	19.4	2.3
Did not receive employer financial aid	68.8	16.9	1.5	6.6	6.3

NOTE: Percentages may not sum to 100 percent due to rounding.

*Undergraduate employees are employed undergraduates who considered themselves primarily employees who enrolled in school, about 36 percent of all employed undergraduates.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

Average employer financial aid amount awarded to undergraduate employees

Undergraduate employees received an average employer financial aid amount of $932 (table 11). Several factors were associated with the average amount of employer financial aid received by undergraduate employees: institutional characteristics, students' grades, being in managerial rather than service occupations and enrollment status.

The amount of employer financial aid received by undergraduate employees was related to the price of attendance. Undergraduate employees who attended postsecondary institutions with tuition and fees of less than $1,000 received smaller average employer financial aid amounts than those attending institutions with higher tuition and fees. Those attending institutions with tuition and fees below $1,000 received $432 compared with $1,399 for those in institutions with tuition and fees between $1,000 and $2,499; $2,781 was received by those paying tuition and fees between $2,500 and $4,999; and $3,437 was received by those paying tuition and fees between $5,000 and $7,499.

Employer financial aid amounts were also associated with the type and control of the institutions the undergraduate employees attended. Undergraduate employees who attended public institutions received an average employer financial aid amount of $510, compared with the $2,321 received by those who attended private, not-for-profit institutions and $2,704 by those who attended private, for-profit institutions. Undergraduate employees who attended 2-year institutions received an average of $425 in employer financial aid. This award was less than the amount received by those in less-than-2-year institutions and 4-year institutions, $1,691 and $1,694 respectively.

Undergraduate employees who sought bachelor's degrees received larger average employer financial aid amounts than those who sought certificates or associate's degrees. Those pursuing bachelor's degrees received $1,890 compared with $850 received by those who sought certificates or awards and $490 by those who sought associate's degrees.

GRADUATE AND FIRST-PROFESSIONAL STUDENTS

Characteristics of graduate students who received employer financial aid

The general characteristics associated with the receipt of employer financial aid by undergraduates were consistent with those found for graduate students; those who were older, had higher incomes, worked full-time and enrolled part-time were more likely to receive employer financial aid. However, institutional characteristics had a different relationship with receipt of employer financial aid for graduate students than was found for the undergraduates. Graduate students charged a lower tuition were more likely to receive employer financial aid than were those charged higher tuition, and institutional control was not related to employer financial aid receipt.

Table 13 shows that older graduate students were more likely to receive employer financial aid than were those who were younger. Five percent of graduate students who were less than 24 years of age received employer financial aid compared with 10 percent of those who were between 24 and 29 years old, 16 percent of those 30 to 39 years of age, and 15 percent of those 40 or older. Further, 5 percent of graduate students who earned less than $10,000 and 6 percent of those between $10,000 and $19,999 received employer financial aid, compared with 13 percent of those who earned between $20,000 and $29,999 and 20 percent of those who earned $30,000 or more.

A graduate student's occupation was related to receipt of employer financial aid. Graduate students in technical (38 percent) and managerial occupations (40 percent) were more likely to receive employer financial aid compared with those in service occupations (4 percent), and more likely than those teaching school (22 percent). Graduate students whose jobs were related to their major were more likely to receive employer financial aid (28 percent) than those in majors not related to their jobs (18 percent).

Unlike undergraduates, graduate students with lower tuition were more likely to receive employer financial aid than were those who attended higher tuition institutions. Fifteen percent of graduate students who attended institutions with tuition and fees less than $1,500 received employer financial aid compared with 7 percent of those who attended institutions with tuition and fees between $9,000 and $13,499 and 2 percent of those paying $13,500 or more. Many graduate students may have attended part-time, so tuition and fees may reflect the intensity of enrollment, not necessarily the institutional control.

Whether the institution was public or private, not-for-profit was not associated with the chances for receipt of employer financial aid. Twelve percent of the graduate and first-professional students in public institutions received employer aid compared with 13 percent in private, not-for-profit institutions. Graduate students who attended comprehensive institutions were more likely to have received employer financial aid than were those attending research universities (15 percent compared with 9 percent).

Forty-two percent of graduate students who considered themselves primarily employees received employer financial aid, compared with 5 percent of those who considered themselves primarily students working to meet expenses. Also, graduate students who attended less than full-time were at least three times as likely to receive employer financial aid than those who enrolled full-time, 19 percent compared with 6 percent respectively. Further, graduate students who worked 30 or more hours per week were at least five times as likely to have received employer financial aid as those who worked less than 30 hours, 35 compared with 6 percent.

Graduate students who did not receive some other types of financial assistance were more likely to receive employer financial aid than were those who did receive other financial assistance. Graduate students who did not receive federal aid were three times as likely to receive employer financial aid than were those who did receive federal aid, 15 compared with 5

percent. Graduate students who did not borrow for their graduate education were more likely to receive employer financial aid compared with those who did, 16 compared with 7 percent.

Five percent of doctoral or first-professional degree students received employer financial aid compared with 16 percent of the Master's degree students. Doctoral and first-professional students were also less likely to have received employer aid than students who were in postbaccalaureate (13 percent) or other graduate programs (12 percent).

Table 13—Percentage of graduate students who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96

	Received employer financial aid	Average employer financial aid received
Total	12.5	$2,451
Gender		
Male	12.6	2,987
Female	12.5	1,980
Marital status		
Not married	10.2	2,518
Married	16.1	2,379
Separated	7.0	--
Primary role while enrolled and working*		
Student working to meet expenses	5.0	3,363
Employee who decided to enroll in school	41.8	2,197
Highest level offering		
Postbaccalaureate certificate	--	--
Master's degree	16.4	1,918
Post-master's certificate	16.9	1,687
Doctoral degree	12.6	2,687
First-professional degree	2.4	3,866
Degree program during first term 1995-96		
Postbaccalaureate certificate	13.0	1,524
Master's degree	15.9	2,620
Doctoral or professional degree	4.8	3,357
Other graduate program	12.2	1,272
Year of first bachelor's degree		
1989 or earlier	27.1	2,219
1990-1993	16.7	2,656
1994 or later	13.6	2,502

Table 13—Percentage of graduate students who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96--Continued

	Received employer financial aid	Average employer financial aid received
Year began graduate education		
1989 or earlier	20.3	--
1990-1993	21.5	2,160
1994 or later	19.9	2,891
Grant aid		
Did receive grant aid	37.2	3,119
Did not receive grant aid	2.2	2,358
Age		
Less than 24	5.1	2,568
24-29	10.4	2,559
30-39	15.9	2,767
40 or older	15.3	1,886
Household income		
Less than $10,000	4.8	4,192
$10,000-$19,999	5.7	2,252
$20,000-$29,999	13.2	2,347
$30,000 or more	19.8	2,241
Attendance intensity		
Full-time	5.5	4,985
Part-time	18.5	2,300
Tuition and fees for terms attended		
Less than $1,500	15.0	885
$1,500-$2,999	15.7	1,958
$3,000-$4,499	14.8	3,180
$4,500-$8,999	10.9	4,084
$9,000-$13,499	7.2	7,147
$13,500 or more	2.2	--
Average hours worked per week while enrolled		
Less than 30	5.9	2,120
30 or more	34.5	2,281
State aid		
Did receive state aid	6.4	--
Did not receive state aid	12.6	2,462
Federal aid (except VA/DOD)		
Did receive federal aid	4.5	3,215
Did not receive federal aid	15.2	2,376

Table 13—Percentage of graduate students who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96--Continued

	Received employer financial aid	Average employer financial aid received
Institutional aid		
Did receive institutional aid	17.8	2,028
Did not receive institutional aid	13.2	2,316
Graduate assistantship or fellowship		
Did receive assistantship or fellowship	5.1	5,402
Did not receive assistantship or fellowship	13.4	2,310
Borrowed for graduate education		
Borrowed for graduate or first professional education	7.4	2,533
Did not borrow for graduate or first professional education	15.5	2,428
Race/ethnicity		
White, non-Hispanic	14.4	2,304
Black, non-Hispanic	10.4	2,696
Hispanic	5.2	--
Asian/Pacific Islander	5.0	--
American Indian/Alaskan Native	6.7	--
Other	2.3	--
Principal job related to major*		
Job related to major	27.5	2,288
Job not related to major	17.8	2,028
Institutional control		
Public	11.6	1,806
Private, not-for-profit	13.2	3,235
Private, for-profit	28.0	2,627
Carnegie code		
Research	8.8	3,505
Doctoral	14.3	2,139
Comprehensive	15.3	1,922
Other	13.8	2,373
Graduate field of study		
Humanities	4.5	--
Social, behavioral sciences	6.3	--
Life and physical sciences	2.7	--
Engineering, computer science, mathematics	5.0	--
Education	5.1	--
Business, management	14.2	3,014
Health	3.3	2,201
Other	3.4	4,290

Table 13—Percentage of graduate students who received employer financial aid, and average employer financial aid award received, by selected characteristics: 1995-96--Continued

	Received employer financial aid	Average employer financial aid received
Occupation		
Clerical, sales	18.6	2,317
Craftsman, skilled operator	22.5	--
Farming	43.7	--
Homemaker	--	--
Laborer	--	--
Manager	39.6	2,395
Military	45.6	--
Not working	1.6	--
Professional	24.0	2,677
Proprietor	--	--
Protective service	--	--
School teacher	22.0	850
Service occupations	4.0	--
Technical	37.5	2,467

--Sample size is too small for a reliable estimate.

NOTE: Total is not within the range of some of the subgroup estimates due to the number of observations with missing values within the subgroups.

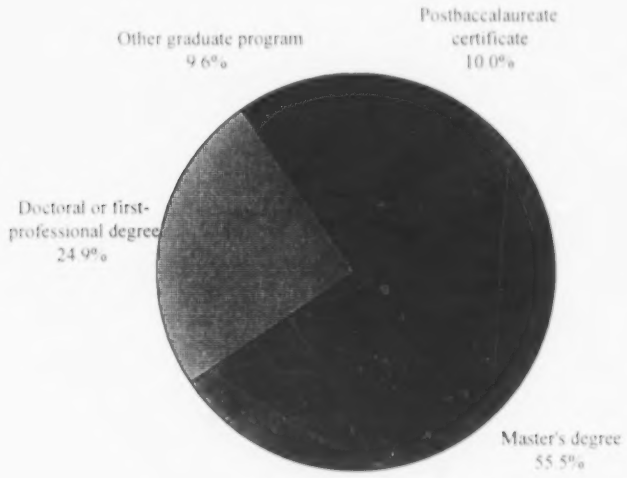
SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Survey (NPSAS:96), Graduate and First-Professional Data Analysis System.

Graduate students by degree sought

Fifty-six percent of the graduate students were enrolled in master's degree programs, which made it the largest category of graduate student enrollment (figure 7), compared with one-quarter of the postgraduate students who were doctoral or first-professional degree students, 10 percent enrolled in postbaccalaureate certificate programs, and another 10 percent enrolled in "other graduate programs."

One reason doctoral and first-professional degree students were less likely to receive employer financial aid than those seeking other graduate degrees may have been that they were more likely than those who sought other types of graduate degrees to enroll full-time (table 14). Sixty-two percent of the doctoral or first-professional students enrolled full-time, compared with 31 percent of those seeking master's degrees, 22 percent of those seeking postbaccalaureate degrees, and 13 percent of those enrolled in other graduate programs.

Figure 7—Percentage distribution of graduate and first-professional students according to type of degree sought: 1995-96



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Graduate and First-Professional Data Analysis System

Another factor associated with doctoral and first-professional students being less likely to receive employer aid is that they were more likely to work part-time than graduate students seeking other degrees. Sixty-eight percent of the doctoral and first-professional students worked less than 30 hours a week, compared with 40 percent of those seeking postbaccalaureate degrees, 38 percent of those seeking master's degrees, and 24 percent of those seeking other graduate degrees.

A final reason that doctoral or first-professional students were less likely to receive employer aid is because they were more likely to identify themselves as students who worked to meet expenses than graduate students in other programs. Seventy-one percent of doctoral or first-professional graduate students were students working to meet expenses, compared with 38

percent of the master's degree students, 32 percent of those seeking a postbaccalaureate degrees, and 12 percent seeking other degrees.

Table 14—Percentage distribution[1] of graduate and first-professional students by degree sought, according to selected characteristics: 1995-96

	Post-baccalaureate certificate	Master's degree	Doctoral or first-professional degree	Other graduate program
Total	100.0	100.0	100.0	100.0
Attendance intensity				
Full-time	22.1	31.0	61.9	12.6
Part-time	77.9	69.0	38.1	87.4
Average hours worked per week while enrolled				
Less than 30	40.4	38.1	68.3	24.4
30 or more	59.6	61.9	31.7	75.6
Primary role while enrolled and working[2]				
Student worked to meet expenses	32.0	37.3	70.5	11.7
Employee decided to enroll	68.0	62.7	29.5	88.3

[1]The columns sum to 100 vertically for each selected characteristic.
[2]Includes only employed respondents

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Graduate and First-Professional Data Analysis System.

Average employer financial aid amount awarded to graduate students who received employer financial aid

Overall, the average employer financial aid awarded was $2,451 to graduate students (table 13). The findings show that the characteristics associated with receiving larger average employer financial aid awards include being male, in professional or managerial occupations compared with schoolteachers, studying business, and higher average tuition. Age and income level of the recipient had significant relationships with the likelihood of receiving employer financial aid with two exceptions. Graduate students from 30-39 years of age were not significantly more likely to receive employer aid than those 40 and older, and those with household incomes of less than $10,000 were not significantly more likely to receive employer aid than those with household incomes from $10,000 to $19,999. There was no significant

relationship between either age or household income, and amount of employer financial aid received.

Male graduate students received larger average employer financial aid awards than females, $2,987 compared with $1,980. This may be associated with career and occupational differences between men and women. An alternate explanation may be the demand of family responsibilities on women that forces them to enroll for fewer units.

Graduate students charged tuition and fees of less than $1,500 received an average employer financial aid amount of $885. Graduate students who attended institutions with tuition and fees between $1,500 and $2,999 received an average employer financial aid award of $1,958. Those who attended institutions with tuition and fees between $3,000 and $4,499 received an average employer financial aid award of $3,180; those who attended institutions with tuition and fees between $4,500 and $8,999 received an average employer financial aid award of $4,084; and those who attended institutions with tuition and fees between $9,000 and $13,499 received an average employer financial aid award of $7,147. Each average employer financial aid award was higher for graduate students paying tuition and fees of $1,500 to $13,499 than the employer financial aid awards made to those paying tuition and fees less than $1,500. Graduate students who attended private, not-for-profit institutions received an average employer financial aid award of $3,235, which is greater than the $1,806 received by graduate students in public institutions.

Occupation was associated with the average amount of employer financial aid received. Graduate students who taught school received an average employer financial aid award of $850, which was less than the $2,677 received by those who were professionals, $2,395 received by managers, or the $2,317 received by those in clerical and sales occupations

Graduate students who were primarily students working to meet expenses received a greater amount of employer aid than those who were primarily employees who enrolled, $3,363 compared with $2,197. Also, the employer financial aid amount received by graduate students working less than 30 hours was not significantly different than that received by those working 30 or more hours per week. Whether the graduate students were in majors related to their jobs was not associated with the employer financial aid award amount. However, graduate students who enrolled full-time, and may have incurred higher tuition and fees, received $4,985, about twice as much as those who enrolled less than full-time, $2,300.

FACTORS ASSOCIATED WITH EMPLOYER AID RECEIPT FOR UNDERGRADUATE EMPLOYEES AFTER CONTROLLING FOR BACKGROUND VARIATION

Crosstabulations have limitations when used with survey data. Sample size restricts the number of cells into which the data can be usefully subdivided. In many instances, complex interrelationships that cannot be disentangled in tabular analysis exist among variables. A linear regression model was used to overcome the limitations of crosstabulations by taking the effects of all variables in the model into account simultaneously and controlling for interrelationships among variables that could influence findings in the crosstabulations. The model produces adjusted means.[14] By estimating the joint effect of all variables taken together, the regression model was used to test individual parameters while holding the influence of other variables constant. Because of the interrelationships among variables, it was of interest to learn if differences still existed with the use of a linear multiple regression model.

Table 15 shows the adjusted percentages of undergraduate employees who received employer financial aid, taking into account several characteristics. The unadjusted percentages are included for comparison.

After taking the other variables in the model into consideration, several findings remained consistent with the tabular analysis, while several others changed. Undergraduate employees whose jobs were related to their majors were still more likely to have received employer financial aid than were those whose jobs were not related to their majors. The regression also confirmed that undergraduate employees who received federal aid were less likely to have received employer financial aid than were those who did not receive federal aid. Further, after adjusting the percentages, high grade point averages remained a predictor of receiving employer financial aid compared with low grade point averages, as did being a business or management major compared with majoring in humanities, social or behavioral sciences, or education. In addition, senior undergraduate employees were more likely to receive employer financial aid than first year/freshmen in both the crosstabular and linear regression analyses. Finally, the crosstabular

[14] Appendix B contains a description of the means adjustment method.

finding that Asian/Pacific Islander undergraduate employees were less likely to receive employer financial aid than were those who were white, non-Hispanic was confirmed by the linear regression.

After taking the other variables in the model into consideration, none of the other findings revealed in the crosstabular analysis were significant.

Table 15—Percentage of undergraduate employees[1] who received employer financial aid, and the adjusted percentage after taking into account the covariation of the variables listed[2]: 1995-96

	Unadjusted percentage[3]	Adjusted percentage[4]	Least squares coefficient[5]	Standard error[6]
Total	24.9	24.9	0.09	16.69
Age				
24 or older	*30.6*	*24.7*	†	†
Less than 24	6.3 *	25.7	0.97	6.47
Attendance intensity				
Part-time	*28.0*	*24.8*	†	†
Full-time	15.8 *	25.4	0.61	3.73
Institutional control				
Private, not-for-profit	*45.6*	*34.0*	†	†
Public	23.0 *	23.8	-10.17	5.82
Private, for-profit	10.9 *	23.4	-10.61	8.95
Undergraduate class level				
First year/freshman	*20.4*	*20.7*	†	†
Second year/sophomore	31.9	28.1	7.37	3.99
Third year/junior	31.3	34.0 *	13.33	5.06
Fourth year or more/senior	35.8 *	35.1 *	14.34	5.65
Degree program during first term				
Certificate or award	*18.2*	*20.6*	†	†
Associate's degree	23.0	27.9	7.33	4.28
Bachelor's degree	33.8*	21.3	0.74	7.18
Undergraduate, non-degree program	28.8	24.6	4.04	6.11
Dependency status				
Dependent	*5.2*	*14.8*	†	†
Independent	29.2*	27.1	12.28	6.87

Table 15—Percentage of undergraduate employees[1] who received employer financial aid, and the adjusted percentage after taking into account the covariation of the variables listed[2]: 1995-96--Continued

	Unadjusted percentage[3]	Adjusted percentage[4]	Least squares coefficient[5]	Standard error[6]
Institution enrollment				
Less than 1,000	*12.3*	*25.7*	†	†
1,000-2,499	31.0 *	26.2	0.53	8.55
2,500-4,999	36.4 *	28.5	2.83	8.85
5,000-7,499	27.0 *	27.2	1.50	9.10
7,500-9,999	29.1 *	26.8	1.13	9.03
10,000 or more	22.7 *	23.0	-2.67	8.37
Gender				
Male	*24.7*	*24.3*	†	†
Female	25.1	25.4	1.07	3.00
Grade point average				
Less than 2.00	*10.1*	*18.0*	†	†
2.00-3.49	36.4 *	24.6	6.61	3.65
3.50 or higher	24.5 *	29.3 *	11.39	3.74
Average hours worked per week while enrolled				
30 or more	*28.2*	*26.2*	†	†
Less than 30	7.5 *	18.1	-8.14	4.19
Institutional aid				
Did receive institutional aid	*30.0*	*34.8*	†	†
Did not receive institutional aid	24.6	24.2	-10.56	5.54
Level of institution				
4-year	*34.5*	*27.8*	†	†
2-year	22.1 *	24.1	-3.71	6.11
Less-than-2-year	7.6 *	19.9	-7.89	10.48
Undergraduate field of study				
Business, management	*34.9*	*30.0*	†	†
Humanities	14.6 *	16.4 *	-13.58	4.62
Vocational, technical	21.2 *	30.8	0.78	7.56
Other technical, professional	18.9 *	26.1	-3.90	4.46
Social, behavioral sciences	15.1 *	14.0 *	-15.98	6.76
Life sciences	14.2	16.1	-13.90	9.78
Physical sciences	--	20.3	-9.69	20.12
Mathematics	--	21.7	-8.24	19.44
Computer, information science	35.9	29.0	-0.99	6.89
Engineering	34.7	35.6	5.58	5.63
Education	14.7 *	14.9 *	-15.04	5.61
Health	23.9	22.8	-7.15	4.79

Table 15—Percentage of undergraduate employees[1] who received employer financial aid, and the adjusted percentage after taking into account the covariation of the variables listed[2]: 1995-96--Continued

	Unadjusted percentage[3]	Adjusted percentage[4]	Least squares coefficient[5]	Standard error[6]
Income percentile				
1st-25th percentile	*10.6*	*28.0*	†	†
26th-50th percentile	10.8	18.2	-9.73	4.99
51st-75th percentile	27.5 *	26.2	-1.82	4.98
76th-100th percentile	35.0 *	26.6	-1.41	5.41
Race/ethnicity				
White, non-Hispanic	*27.2*	*25.6*	†	†
Black, non-Hispanic	23.3	27.2	1.61	4.15
Hispanic	17.7	22.7	-2.89	4.71
Asian/Pacific Islander	6.0*	9.1*	-16.52	8.23
American Indian/Alaskan Native	6.3 *	15.3	-10.34	12.62
Other	--	-5.4	-30.96	40.69
Weeks employed while enrolled				
Worked every week while enrolled	*26.7*	*24.9*	†	†
Worked most of the weeks while enrolled	14.5 *	24.6	-0.34	4.74
Worked about half of weeks while enrolled	21.9	32.1	7.15	11.79
Worked less than half of weeks while enrolled	7.9 *	20.7	-4.21	9.26
Principal job related to major				
Job not related to major	*13.9*	*17.3*	†	†
Job related to major	37.5 *	30.6 *	13.30	2.92
Marital status				
Married	*34.0*	*25.4*	†	†
Not married	18.9*	24.8	-0.64	3.46
Separated	12.8	20.9	-4.53	8.58
State aid				
Did receive state aid	*7.7*	*16.7*	†	†
Did not receive state aid	25.8 *	25.3	8.65	6.70
Federal aid (except VA/DOD)				
Did receive federal aid	*8.4*	*11.3*	†	†
Did not receive federal aid	28.6 *	28.3 *	16.96	4.32

Table 15—Percentage of undergraduate employees[1] who received employer financial aid, and the adjusted percentage after taking into account the covariation of the variables listed[2]: 1995-96--Continued

	Unadjusted percentage[3]	Adjusted percentage[4]	Least squares coefficient[5]	Standard error[6]
Tuition and fees for terms attended				
Less than $1,000	*24.5*	*23.0*	†	†
$1,000-$2,499	25.6	29.3	6.21	4.39
$2,500-$4,999	30.5	32.0	8.98	6.90
$5,000-$7,499	23.3	27.6	4.54	9.94
$7,500-$9,999	15.4	28.0	4.94	13.56
$10,000 or more	26.8	27.9	4.86	13.66

*p < .05.
†Not applicable for the reference group.

[1]Undergraduate employees are employed undergraduates who considered themselves primarily employees who enrolled in school, about 36 percent of all employed undergraduates.
[2]The italicized group in each category is the reference group being compared.
[3]The estimates are from the NPSAS:96 Undergraduate Data Analysis System.
[4]The percentages are adjusted for differences associated with other variables in the table (see appendix B).
[5]Least squares coefficient, multiplied by 100 to reflect percentage (see appendix B).
[6]Standard error of least squares coefficient, adjusted for design effect, multiplied by 100 to reflect percentage (see appendix B).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

CONCLUSION AND SUMMARY

Employer financial aid may be a minor student aid program in relation to federal, state, and institutional efforts. Nonetheless, it can be a significant source of assistance for both older and part-time students (see table 11). The average undergraduate employer financial aid recipient received $932 and the average graduate recipient received $2,451 from his or her employer.

The two data sources used for this report, NHES and NPSAS, provide information describing the award of employer financial aid to help employees further their education. The two datasets represent different approaches to collecting data. NHES collected data from a sample of families and NPSAS collected information from a sample of students enrolled in postsecondary institutions. Given the differences, there was general agreement on several points. First, respondents over 24 and married were more likely to receive employer financial aid than were those who were younger and single. Second, those who worked full-time and attended school part-time were more likely to receive employer financial aid. Third, those students who worked in technical fields were more likely to receive employer financial aid than were those in many other occupational areas. Fourth, graduate students seeking master's degrees were more likely to receive employer financial aid than were those seeking doctoral or first-professional degrees.

The results from NPSAS and NHES suggest that employer financial aid to help employees attend postsecondary institutions was modest. NHES suggests that employers were more likely to provide support for work-related training than they were for credential enrollment. NPSAS indicates that 6 percent of the undergraduates received aid from their employer. The aid was concentrated among those students who identified themselves as employees who attend school. One-quarter of these students received employer financial aid.

In the introduction, four questions were posed. The report provided information related to each of the four.

1. What types of training and education did employers support?

The NHES data indicate that employers tended to support work-related programs in preference to credential programs. Eighty-eight percent of the employees who participated in work-related programs received financial aid from their employer compared with 24 percent of those in credential programs. Twenty-one percent of adults participated in work-related programs compared with 13 percent who enrolled in credential programs.

Among undergraduates in credential programs, the greater likelihood of receiving employer support for work-related programs was still evident. According to NPSAS, adults enrolled in business programs were much more likely to receive employer financial aid than were those who enrolled in postsecondary programs such as humanities or social sciences. Graduate students enrolled in business programs were also more likely to receive employer financial aid than were those in other programs. The NHES data told a different story because it was not possible to report results for those undergraduates who were primarily students who worked separately from those who were primarily employees who took classes.

2. How important were postsecondary institutions in providing employer supported training and education compared with other sources of education?

Adults were more likely to participate in work-related programs or other structured programs than they were in credential programs. The NHES results suggest that some employees identified as credential-seeking students may have been enrolled in professional certification programs of some type that were not offered by postsecondary institutions. The implication of these findings is that postsecondary institutions' credential programs may account for a relatively small share of the total education and training paid for by employers. Employees were more likely to receive employer assistance if they participated in short programs rather than those that were an academic quarter or semester in length.

3. Which postsecondary institutions were most likely to enroll students who received aid from their employers?

Sixty percent of the undergraduate employees who received employer financial aid attended public, less-than-4-year institutions. Another 17 percent attended public, 4-year institutions and 19 percent attended private, not-for-profit, 4-year institutions. Undergraduate employees who attended private, not-for-profit institutions were twice as likely to receive employer financial aid as were those who attended public institutions.

4. Which types of employees were most likely to receive financial support from employers if they enrolled in a credential program?

The NPSAS data indicated that undergraduates who perceived themselves primarily as students who worked were less likely to receive employer financial aid than were those who identified themselves as employees who attended school (called undergraduate employees in this report). Undergraduate employees who worked full-time rather than part-time were more likely to receive employer aid. The NHES data indicated that those students who worked full-time were more likely to have their employer pay for enrollment in a credential program than were those who worked part-time.

Employees in technical fields had a higher chance of receiving employer financial aid than those in occupations such as sales and marketing. In addition, employees in executive, management, or professional positions were more likely to receive employer financial aid than were those in occupations such as administrative assistant.

APPENDIX A: GLOSSARY

This glossary describes the variables used in this report. The variables were taken directly from the NCES NPSAS:96 Undergraduate, NPSAS:96 Graduate and First-Professional, and NHES:95 Adult Education Data Analysis Systems (DAS). These are NCES software applications that generate tables from their respective data. A description of the DAS software can be found in appendix B. The variable labels are italicized; the variable name as it appears in the DAS is shown to the right. The variables are listed by variable category within the appropriate dataset, and in alphabetical order by variable label.

GLOSSARY INDEX

NHES:95 Variables

Respondent characteristics

Age ..... AGE
Annual personal earnings ..... PERSEARN
Gender ..... SEX
Highest level of education completed ..... IBGRADE
Hours worked per week ..... PAYHRS
Industry of respondent's current job ..... INDUSTRY
Language spoken most at home ..... IBSPEAK
Marital status ..... AMARSTAT
Number of household members under 18 ..... HHUNDR18
Own or rent home, or other arrangement ..... HOWNHOME
Race/ethnicity ..... RACE
Reason for adult education participation: advance in job ..... IMPROVE
Reason for adult education participation: improve basic skills ..... RRR
Reason for adult education participation: meet requirements ..... MEETREQ
Reason for adult education participation: personal reasons ..... PERSONAL
Reason for adult education participation: train for new job ..... TRAIN
Respondent's current occupation ..... OCCUP
Total household income ..... HINCOME

Credential programs variables

Credential programs: average cost ..... CR_COST
Credential programs: average hours, full-time ..... CRFT_HRS
Credential programs: average hours, part-time ..... CRPT_HRS
Credential programs: average months, full-time ..... CRFT_MNT
Credential programs: average months, part-time ..... CRPT_MNT
Credential programs: employer aid ..... CR_EMP
Credential programs: employer provided due to union agreement ..... CRD_UNI
Credential programs: employer required ..... CR_REQ
Credential programs: enrollment level ..... CR_PGM
Credential programs: major field of study MAJOR1
Credential programs: number of courses ..... CRD_NCLS
Credential programs: part of assistantship or fellowship ..... CR_ASST
Credential programs: participation ..... CRDIPART
Credential programs: total cost ..... CR_TCOST
Credential programs: type of institution offering program ..... CRD_PRV

Other structured programs variables

Other structured programs: average cost ..... SA_COST
Other structured programs: average hours ..... SA_HRS
Other structured programs: average weeks ..... SA_WKS
Other structured programs: employer aid ..... SA_EMP

Other structured programs: number of programs ..... SANEW
Other structured programs: participation ..... SAACTY
Other structured programs: provider type ..... SA_PRV
Other structured programs: total cost ..... SA_TCOST

Work-related programs variables

Work-related programs: average cost ..... WR_COST
Work-related programs: average hours ..... WR_THRS
Work-related programs: average weeks in class ..... WR_WKS
Work-related programs: employer aid ..... WR_EMP
Work-related programs: employer required ..... WR_REQ
Work-related programs: employer provided due to union contract ..... WR_UNI
Work-related programs: number of programs taken ..... WRNEW
Work-related programs: participation ..... WRACTY

Other variables

Employer provided any employee benefits ..... BENEFITS
ESL, ABE or GED programs: employer aid ..... ESL_EMP
ESL, ABE or GED programs: participation ..... BSPARTIC

NPSAS:96 Undergraduate variables

Age as of 12/31/95 ..... AGE
Attendance intensity ATTEND2
Average hours worked per week while enrolled ..... HRSWORK
Dependency status ..... DEPEND
Degree program during first term ..... DEGFIRST
Employer aid ..... EMPLYAMT
Federal aid ..... TFEDAID
Gender ..... GENDER
Grade point average GPA2
Highest level offering HLOFFER2
Income percentile PCTALL2
Income and dependency level ..... INCOME
Institution enrollment ..... ENRLSIZE
Institution type (level and control) ..... SECTOR
Institutional aid ..... INSTAMT
Institutional control ..... CONTROL
Level of institution ..... LEVEL
Marital status ..... SMARITAL
Occupation STUOCC1
Primary role while enrolled and working ..... SEROLE
Principal job related to major ..... SERELMAJ
Race/ethnicity ..... RACE
Single parent ..... SINGLPAR
State aid ..... STATEAMT
Tuition and fees for terms attended ..... TUITION
Undergraduate field of study MAJORS3
Undergraduate class level UGLEVEL1
Weeks employed while enrolled ..... SEENRWKS

NPSAS:96 Graduate and first-professional student variables

Age as of 12/31/95 ..... AGE
Any aid ..... TOTAID
Average hours worked per week while enrolled ..... HRSWORK
Attendance intensity ..... ATTEND
Borrowed for graduate education BORAMT3
Carnegie code ..... CARNEGIE
Degree sought ..... DEGFIRST
Employer aid ..... EMPLYAMT
Federal aid ..... TFEDAID
Gender ..... GENDER
Graduate assistantship or fellowship ..... ASTAMT
Graduate field of study MAJORS4
Grant aid ..... TOTGRT
Highest level offering HLOFFER2
Household income ..... INCOME
Institutional aid ..... INSTAMT
Institutional control ..... CONTROL
Marital status ..... SMARITAL
Occupation STUOCC1
Primary role while enrolled and working ..... SEROLE
Principal job related to major ..... SERELMAJ
Race/ethnicity ..... RACE
State aid ..... STATEAMT
Tuition and fees for terms attended ..... TUITION
Year began graduate education ..... GRADPYR
Year of first bachelor's degree ..... SABA-YR

NHES:95 VARIABLES

Respondent characteristics

Age — AGE

Age of the respondent at the time of the survey.

Less than 24
24-39
40-54
55-69
70 or more

Annual personal earnings — PERSEARN

Respondent's personal earnings over the past 12 months.

$20,000 or less
$20,001-$35,000
$35,001-$50,000
Over $50,000

Gender — SEX

Male
Female

Highest level of education completed — IBGRADE

Less than high school
High school diploma or equivalent
Some postsecondary education
Associate's degree
Bachelor's degree
Graduate degree

Hours worked per week — PAYHRS

The total number of hours per week usually worked for pay including all jobs.

None
One to thirty
More than thirty

Industry of respondent's current job INDUSTRY

Industry of the respondent's job(s) in 1995. Each respondent was asked about up to three jobs in 1995. If more than one was indicated, this variable was coded as multiple jobs, multiple industries.

Agriculture, forestry, fishing
Mining
Construction
Manufacturing
Transportation, public utilities
Wholesale trade
Retail trade
Finance, insurance, real estate
Service
Health services
Education
Public administration
Other
Multiple jobs, multiple industries

Language spoken most at home IBSPEAK

Primary language spoken in respondent's home.

English
Spanish
Other language

Marital status AMARSTAT

Married
Separated
Divorced
Widowed
Never married

Number of household members under 18 HHUNDR18

Number of household members under 18 living in home, regardless of relationship or dependency.

None
One
Two or more

Own or rent home, or other arrangement **HOWNHOME**

Own home
Rent home
Other arrangement

Race/ethnicity **RACE**

American Indian/Alaskan Native	A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.
Asian/Pacific Islander	A person having origins in any of the Asian or Pacific Islander original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or Pacific Islands. This includes people from China, Japan, Korea, the Philippine Islands, Samoa, India and Vietnam.
Black, non-Hispanic	A person having origins in any of the black racial groups of Africa, and not of Hispanic origin.
Hispanic	A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
White, non-Hispanic	A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (except those of Hispanic origin).
Other	A person not in one of the above categories.

Reason for adult education participation: advance in job **IMPROVE**

Whether the respondent participated in adult education to improve, advance or keep up-to-date on the current job. Applies to any type of adult education the respondent participated in.

Took adult education to improve or advance in job
Did not take adult education to improve or advance in job

Reason for adult education participation: improve basic skills **RRR**

Whether the respondent participated in adult education to improve basic reading, writing, or mathematics skill. Applies to any type of adult education the respondent participated in.

Took adult education to improve basic skills
Did not take adult education to improve basic skills

Reason for adult education participation: meet requirements **MEETREQ**

Whether the respondent participated in adult education to meet requirements for a high school diploma or GED, diploma, degree or certificate of completion. Applies to any type of adult education the respondent participated in.

Took adult education to meet requirements
Did not take adult education to meet requirements

Reason for adult education participation: personal reasons **PERSONAL**

Whether the respondent participated in adult education for personal, family or social reasons. Applies to any type of adult education the respondent participated in.

Took adult education for personal reasons
Did not take adult education for personal reasons

Reason for adult education participation: train for new job **TRAIN**

Whether the respondent participated in adult education to train for a new job or career. Applies to any type of adult education the respondent participated in.

Took adult education to train for new job
Did not take adult education to train for new job

Respondent's current occupation **OCCUP**

Occupation of the respondent's job(s) in 1995. Each respondent was asked about up to three jobs in 1995. If more than one was indicated, this variable was coded as multiple jobs, multiple occupations.

Executive, administrative, managerial
Engineer, surveyor, architect
Natural scientist, mathematician
Social scientist/worker, lawyer
Teacher, postsecondary
Physician, dentist, veterinarian
Registered nurse, pharmacist
Writer, artist, entertainer, athlete
Health technologist/technician
Technologist, not health
Marketing, sales
Administrative support
Service
Agriculture, forestry, fishing
Mechanic, repairer
Construction
Precision production
Production
Transportation, material moving
Handler, cleaner, helper, laborer
Other
Multiple jobs, multiple occupations

Total household income **HINCOME**

The total income of all persons in the household over the past year, including salaries or other earnings, interest, retirements, and so on.

$20,000 or less
$20,001-$35,000
$35,001-$50,000
Over $50,000

Credential programs variables

Credential programs: average cost **CR_COST**

The average cost the respondent incurred per credential program during the past 12 months. Each respondent was questioned about up to three credential programs they may have participated in.

None
Less than $100
$100-$499
$500-$999
$1,000-$2,499
$2,500-$4,999
$5,000 or more

Credential programs: average hours, full-time **CRFT_HRS**

The average hours per week spent in credential program(s) on a full-time basis during the past 12 months. Each respondent was questioned about up to three credential programs they may have participated in.

Less than three
Three to six
More than six

Credential programs: average hours, part-time **CRPT_HRS**

The average hours per week spent in credential programs on a part-time basis during the past 12 months. Each respondent was questioned about up to three credential programs they may have participated in.

Less than four
Four to six
More than six

Credential programs: average months, full-time **CRFT_MNT**

The average months the respondent spent in credential programs on a full-time basis during the past 12 months. Each respondent was questioned about up to three credential programs they may have participated in.

Less than three
Three to five
Six to eight
Nine to twelve

Credential programs: average months, part-time **CRPT_MNT**

The average months the respondent spent in credential programs on a part-time basis during the past 12 months. Each respondent was questioned about up to three credential programs they may have participated in.

Less than three
Three to five
Six to eight
Nine to twelve

Credential programs: employer aid **CR_EMP**

Combination of employer aid received by respondent for enrollment in credential program(s). Respondents who received financial assistance may or may not have received other forms of employer support as well.

No employer aid
Employer paid
Employer provided support

Credential programs: employer provided due to union agreement **CRD_UNI**

Whether the employer support provided for credential program(s) was part of a union agreement.

Aid part of union contract
Aid not part of union contract

Credential programs: employer required **CR_REQ**

Whether the credential program(s) was required by the employer.

Employer required credential program
Employer did not require credential program

Credential programs: enrollment level **CR_PGM**

The highest level credential program the respondent was enrolled in.

Vocational/technical certificate
Associate's degree
Bachelor's degree
Master's degree
Doctoral degree
First-professional degree
Other

Credential programs: major field of study **MAJOR1**

Major field of study for highest level credential program the respondent was enrolled in.

Humanities
Social, behavioral science
Life science/physical science
Mathematics
Computer, information science
Engineering
Education
Business, management
Health
Vocational, technical
Other

Credential programs: number of courses **CRD_NCLS**

Number of courses taken in credential program(s) the respondent enrolled in during the past 12 months.

One
Two
More than two

Credential programs: number of credential programs participated in **CRDIPNEW**

Number of credential programs the respondent participated in during the past 12 months.

One
More than one

Credential programs: part of assistantship or fellowship **CR_ASST**

Whether the credential program(s) was required as part of an assistantship or fellowship.

Part of assistantship or fellowship
Not part of assistantship or fellowship

Credential programs: participation **CRDIPART**

Whether the respondent participated in any credential program during the past 12 months.

Participated in credential programs
Did not participate in credential programs

Credential programs: total cost **CR_TCOST**

The total cost the respondent incurred for credential program(s). Each respondent was questioned about up to three credential programs they may have participated in.

None
Less than $100
$100-$499
$500-$999
$1,000-$2,499
$2,500-$4,999
$5,000 or more

Credential program: type of institution offering program **CRD_PRV**

Institution where the respondent received instruction for the credential program(s).

Primary/secondary school
2-year community or junior college
2-year vocational or technical school
4-year college or university
Private vocational or trade school
Business, industry
Professional association
Other
Multiple

Other structured programs variables

Other structured programs: average cost **SA_COST**

The average cost incurred by respondent for all other structured program(s) during the past 12 months. Each respondent was questioned about up to three other structured programs.

None
Less than $100
$100-$499
$500-$999
$1,000-$2,499
$2,500-$4,999
$5,000 or more

Other structured programs: average hours **SA_HRS**

Average number of hours the respondent spent per program during the past 12 months in other structured program(s). Each respondent was questioned about up to three other structured programs.

Less than four
Four to six
More than six

Other structured programs: average weeks **SA_WKS**

The average number of weeks per year the respondent spent in other structured programs during the past 12 months. Each respondent was questioned about up to three other structured programs.

One
Two to five
More than five

Other structured programs: employer aid **SA_EMP**

Combination of employer aid received for other structured programs.

No employer aid
Employer provided support

Other structured programs: number of programs **SANEW**

Number of other structured programs the respondent participated in during the past 12 months.

One
Two
Three or more

Other structured programs: participation **SAACTY**

Whether the respondent participated in other structured program during the past 12 months.

Participated in other structured program
Did not participate in structured program

Other structured programs: provider type **SA_PRV**

Institution where the respondent received instruction for the structured program(s).

Primary/secondary school
College or university
Other

Other structured programs: total cost **SA_TCOST**

The total cost incurred by respondent for all other structured programs during the past 12 months. Each respondent was questioned about up to three other structured programs.

None
Less than $100
$100-$499
$500-$999
$1,000-$2,499
$2,500 or more

Work-related programs variables

Work-related programs: average cost **WR_COST**

The average cost incurred by respondent for all work-related programs during the past 12 months. Each respondent was questioned about up to six work-related programs.

None
Less than $100
$100-$499
$500-$999
$1,000-$2,499
$2,500-$4,999
$5,000 or more

Work-related programs: average hours **WR_THRS**

The average hours in class per week the respondent spent in all work-related programs during the past 12 months. Each respondent was questioned about up to six work-related programs.

Less than four
Four to eight
More than eight

Work-related programs: average weeks in class **WR_WKS**

The average number of weeks per year spent in all work-related programs during the past 12 months. Each respondent was questioned about up to six work-related programs. This variable reflects the average number of weeks spent in all work-related programs the respondent participated in.

One
Two
Three to five
More than five

Work-related programs: employer aid **WR_EMP**

Combination of employer aid received for work-related programs the respondent participated in. Respondents who received financial assistance may or may not have received other forms of employer support as well.

Employer paid
Employer provided other support

Work-related programs: employer required **WR_REQ**

Whether the employer required any of the work-related programs in which the respondent enrolled.

Employer required work-related programs
Employer did not require work-related programs

Work-related programs: employer provided due to union contract **WR_UNI**

Whether the employer support provided for work-related programs was given as a part of a union agreement.

Employer aid provided as part of union contract
Employer aid not provided as part of union contract

Work-related programs: number of programs taken **WRNEW**

Number of work-related programs the respondent participated in during the past 12 months.

One
Two to five
More than five

Work-related programs: participation **WRACTY**

Whether the respondent participated in any work-related programs during the past 12 months.

Participated in work-related program
Did not participate in work-related program

Other variables

Employer provided any employee benefits **BENEFITS**

Whether the respondent's employer provided benefits other than educational support such as medical sick pay, retirement, or vacation pay, to the respondent, as reported by the respondent.

Employer did provide employee benefits
Employer did not provide employee benefits

ESL, ABE or GED programs: employer aid **ESL_EMP**

Combination of employer aid received for ESL, ABE or GED programs.

No employer aid
Employer paid
Employer provided other support

ESL, ABE or GED programs: participation **BSPARTIC**

Whether the respondent participated in any ESL, ABE, or GED program during the past 12 months.

Participated in ESL, ABE or GED programs
Did not participate in ESL, ABE, or GED programs

NPSAS:96 UNDERGRADUATE VARIABLES

Age as of 12/31/95 **AGE**

Less than 24
24 or older

Any aid **TOTAID**

The total amount of financial aid received from all sources in 1995-96, including federal, state, institution and other sources. The percentage of students who received any financial aid is the percentage with positive amounts recorded for this variable.

Did receive any aid
Did not receive any aid

Attendance intensity **ATTEND2**

Student's attendance status in September 1995 as defined by the institution.

Full-time
Part-time

Average hours worked per week while enrolled **HRSWORK**

The average hours the student worked per week while enrolled. This variable is based on student's report of average hours worked during 1995-96. Average hours greater than sixty were recorded to sixty, and a student with zero jobs was recoded as zero on hours worked.

Less than 30
30 or more

Dependency status **DEPEND**

Student's dependency status.

Dependent: Students were financially dependent if they did not meet any of the criteria for independence (see below).

Independent: A student was considered independent by meeting one of the following criteria:

- Was 24 or older as of 12/31/95.
- Was a veteran.
- Was an orphan or ward of the court.
- Had legal dependents, other than spouse.
- Was married, and not claimed by parents on 1995 tax returns.
- Was a graduate student and not claimed as a dependent by parents on 1995 tax return.

Degree program during first term **DEGFIRST**

Degree program the student was enrolled in during first term of the academic year.

Certificate or award
Associate's degree
Bachelor's degree
Undergraduate, non-degree program

Employer aid **EMPLYAMT**

Total amount of employer aid received by the student. Employer aid is financial aid received from the business, corporation, institution, or individual that employed the student. It includes tuition waivers for employees of postsecondary institutions and their dependents. The percentage of students with employer aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received employer aid.

Received employer aid
Did not receive employer aid

Federal aid **TFEDAID**

The total amount of federal financial aid, including loans, grants, work-study, and all other federal aid the student received, excluding Veterans' Administration/Department of Defense aid. The percentage of students who received any federal aid is the percentage with positive amounts recorded for this variable.

Did receive federal aid
Did not receive federal aid

Gender **GENDER**

Male
Female

Grade point average **GPA2**

Student's grade point average during 1995. The grade point average format used by each institution was identified and converted to the 0.0-4.0 scale.

Less than 2.00
2.00-3.49
3.50 or higher

Highest level offering **HLOFFER2**

The highest level degree offering of the institution where the student was sampled.

Certificate or other formal award
Associate's degree
Bachelor's degree
Master's degree or equivalent
Doctoral degree
First-professional degree

Income percentile **PCTALL2**

This indicates income percentiles for all students in 1995. It is equal to the proportion of the sample who had an income lower than that recorded for the student in the survey. It uses parents' income if the student is dependent. If the student is independent, his or her income was used.

1st-25th percentile
26th-50th percentile
51st-75th percentile
76th-100th percentile

Income and dependency level **INCOME**

This is the income level and dependency status of the student. Parents' or guardians' income is the income source for dependent students; the source of independent students' income combines their own earnings and those of their spouse, if married.

Dependent student:

Less than $20,000	Income of less than $20,000 in 1995.
$20,000 to $29,999	Income between $20,000 and $29,999 in 1995.
$30,000 to $39,999	Income between $30,000 and $39,999 in 1995.
$40,000 to $49,999	Income between $40,000 and $49,999 in 1995.
$50,000 to $59,999	Income between $50,000 and $59,999 in 1995.
$60,000 to $69,999	Income between $60,000 and $69,999 in 1995.
$70,000 or more	Income of $70,000 or higher in 1995.

Independent student:

Less than $10,000	Income of less than $10,000 in 1995.
$10,000 to $19,999	Income between $10,000 and $19,999 in 1995.
$20,000 to $29,999	Income between $20,000 and $29,999 in 1995.
$30,000 or more	Income of $30,000 or higher in 1995.

Institution enrollment **ENRLSIZE**

This variable indicates the size of the institution's enrollment. It is the sum of undergraduate, graduate and first-professional students.

Less than 1,000
1,000-2,499
2,500-4,999
5,000-7,499
7,500-9,999
10,000 or more

Institution type (level and control) **SECTOR**

Indicates the level and control of the NPSAS institution where the respondent was surveyed.

Public, 2-year or less
Public, 4-year
Private, not-for-profit, less-than-4-year
Private, not-for-profit, 4-year
Private, for-profit

Institutional aid **INSTAMT**

This variable indicates the total amount of institutional aid the student received. Institutional aid includes grants and loans from the institution attended, institution-sponsored work-study, and all other institutional aid, including research and teaching assistantships. Institutional aid also includes assistantships funded by federal research grants. The percentage of students with institutional aid is the percentage with positive amounts recorded for this variable.

Did receive institutional aid
Did not receive institutional aid

Institutional control **CONTROL**

The control of the institution where the student was sampled.

Public
Private, not-for-profit
Private, for-profit

Level of institution **LEVEL**

Less-than-2-year
2-year
4-year

Marital status **SMARITAL**

The student's marital status on the date the student applied for financial aid (based on the Free Application for Federal Student Aid), or if the student did not apply for financial aid, marital status as reported by the institution.

Not married	Student was not married.
Married	Student was married.
Separated	Student was separated.

Occupation **STUOCC1**

Indicates respondent's principal occupation for employed undergraduates. The job used for occupation coding was the principal job held while enrolled.

Clerical
Manager
Professional
Technical
Service
Sales
Proprietor
Skilled laborer
Military
Homemaker
Other
Not working

Primary role while enrolled and working **SEROLE**

It applies to respondents who were employed while enrolled.

Student worked to meet expenses
Employee decided to enroll in school

Principal job related to major **SERELMAJ**

Was the principal job related to the student's major field, as reported by the respondent.

Job related to major
Job not related to major

Race/ethnicity **RACE**

American Indian/Alaskan Native	A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.
Asian/Pacific Islander	A person having origins in any of the Asian or Pacific Islander original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or Pacific Islands. This includes people from China, Japan, Korea, the Philippine Islands, Samoa, India and Vietnam.
Black, non-Hispanic	A person having origins in any of the black racial groups of Africa, and not of Hispanic origin.
Hispanic	A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
White, non-Hispanic	A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (except those of Hispanic origin).
Other	A person not in one of the above categories.

Single parent **SINGLPAR**

Identifies independent students who were single parents. Students were considered to be single parents if they had dependents and were not married. In other words, students who were single caretakers of dependents were considered single parents.

Respondent was a single parent
Respondent was not a single parent

State aid **STATEAMT**

Indicates the total amount of state aid received. State aid includes state grants, loans, state-sponsored work-study, and all other state financial aid. The percentage of students who received state aid is the percentage with positive amounts recorded for this variable.

Did receive state aid
Did not receive state aid

Tuition and fees-amount for terms attended **TUITION**

Actual amount of tuition charged the student for the terms attended through 1995-96, as reported by the institution. The student report was used if institutional data were not available or if the student attended more than one institution during the academic year. The average amount is the average of all students, including those who did not have any tuition or fees.

Less than $1,000
$1,000-$2,499
$2,500-$4,999
$5,000-$7,499
$7,500-$9,999
$10,000 or more

Undergraduate class level **UGLEVEL1**

Student's year in college or university:

First year/freshman
Second year/sophomore
Third year/junior
Fourth year or more/senior

Undergraduate field of study **MAJORS3**

Indicates student's major field of study.

Humanities
Social, behavioral sciences
Life sciences
Physical sciences
Mathematics
Computer, information science
Engineering
Education
Business, management
Health
Vocational, technical
Other technical, professional

Weeks employed while enrolled **SEENRWKS**

Indicates if student worked for all, most, half, or less than half of weeks while enrolled.

Worked every week while enrolled
Worked most of the weeks while enrolled
Worked about half of the weeks while enrolled
Worked less than half of the weeks while enrolled

NPSAS:96 GRADUATE AND FIRST-PROFESSIONAL STUDENT VARIABLES

Age as of 12/31/95 **AGE**

Less than 24
24-29
30-39
40 or older

Any aid **TOTAID**

The total amount of financial aid received from all sources in 1995-96, including federal, state, institution and other sources. The percentage of students who received any financial aid is the percentage with positive amounts recorded for this variable.

Did receive any aid
Did not receive any aid

Attendance intensity **ATTEND**

Student's attendance status in September 1995 as defined by the institution.

Full-time
Part-time

Average hours worked per week while enrolled **HRSWORK**

The average hours the student worked per week while enrolled. Students with zero jobs were recorded to zero on hours worked. Average hours greater than 60 were recorded to 60.

Less than 30
30 or more

Borrowed for graduate education **BORAMT3**

The cumulative amount borrowed for graduate education through 1996. The percentage of students with positive values for this variable is the percentage who borrowed for graduate education.

Borrowed for graduate or first-professional education
Did not borrow for graduate or first-professional education

Carnegie code **CARNEGIE**

Carnegie classification code for student's institution.

Research	These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They award 50 or more doctoral degrees each year and receive at least $15.5 million in federal support annually.
Doctoral	These institutions offer a full range of baccalaureate programs and are committed to graduate education through the doctorate. They award at least 10 or more doctoral degrees in 3 or more disciplines annually, or 20 or more doctoral degrees in one or more disciplines.
Comprehensive	These institutions offer a full range of baccalaureate programs and are committed to graduate education through the master's degree. They award 20 or more master's degrees annually in one or more disciplines.
Other	These institutions include graduate centers, maritime academies, military institutes, and institutions that do not fit any other classification category.

Degree sought ***DEGFIRST***

Indicates the degree program in which the respondent was enrolled during the first term at the NPSAS institution.

Postbaccalaureate certificate
Master's degree
Doctoral or first-professional degree
Other graduate program

Employer aid **EMPLYAMT**

Total amount of employer aid received by the student. Employer aid is financial aid received from the business, corporation, institution, or individual by whom the student is employed. It includes tuition waivers for employees of postsecondary institutions and their dependents. The percentage of students with employer aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received employer aid.

Received employer aid
Did not receive employer aid

Federal aid **TFEDAID**

The total amount of federal financial aid, including loans, grants, work-study, and all other federal aid the student received, excluding Veterans' Administration/Department of Defense aid. The percentage of students who received any federal aid is the percentage with positive amounts recorded for this variable.

Did receive federal aid
Did not receive federal aid

Gender **GENDER**

Male
Female

Graduate assistantship or fellowship **ASTAMT**

Indicates amount of assistantships/fellowships received during 1995-96. It is the sum of amounts from all research, teaching and other assistantships or fellowships during the year. It is also classified as other type of aid in the award grid. It is often treated as employer salaries rather than financial aid by institutions and may not be recorded in the financial aid records. The percentage of students with positive amounts on this variable is the percentage with an assistantship or fellowship.

Did receive assistantship or fellowship
Did not receive assistantship or fellowship

Graduate field of study **MAJORS4**

Indicates student's major field of study.

Humanities
Social, behavioral sciences
Life and physical sciences
Engineering, computer science, mathematics
Education
Business, management
Health
Other

Grant aid **TOTGRT**

The total amount of all grants and scholarships, federal, institutional and other received by the student. Grants are a type of student financial aid that does not require repayment or employment. Grants include scholarships and fellowships. Tuition waivers and employer aid are considered grant aid. The percentage of students with grants is the percentage with positive amounts recorded for this variable.

Did receive grant aid
Did not receive grant aid

Highest level offering **HLOFFER2**

The highest level degree offering of the institution where the student was sampled.

Postbaccalaureate certificate
Master's degree
Post-master's certificate
Doctoral degree
First-professional degree

Household income **INCOME**

Total household income in 1994, derived from dependency and categorical income levels.

Less than $10,000	Income of less than $10,000 in 1995.
$10,000 to $19,999	Income between $10,000 and $19,999 in 1995.
$20,000 to $29,999	Income between $20,000 and $29,999 in 1995.
$30,000 or more	Income of $30,000 or higher in 1995.

Institutional aid **INSTAMT**

Indicates the total amount of institutional aid the student received. Institutional aid includes grants and loans from the institution attended, institution-sponsored work-study, and all other institutional aid, including research and teaching assistantships. Institutional aid also includes assistantships funded by federal research grants. The percentage of students with institutional aid is the percentage with positive amounts recorded for this variable.

Did receive institutional aid
Did not receive institutional aid

Institutional control **CONTROL**

The control of the institution where the student was sampled.

Public
Private, not-for-profit
Private, for-profit

Marital status **SMARITAL**

The student's marital status on the date the student applied for financial aid (based on the Free Application for Federal Student Aid), or if the student did not apply for financial aid, marital status as reported by the institution.

Not married	Student was not married.
Married	Student was married.
Separated	Student was separated.

Occupation **STUOCC1**

Indicates student's principal occupation. The job used for occupation coding was the principal job held while enrolled.

Clerical, sales
Craftsman, skilled operator
Farming
Homemaker
Laborer
Manager
Military
Not working
Professional
Proprietor
Protective service
School teacher
Service occupations
Technical

Primary role while enrolled and working **SEROLE**

Primary role of student who worked while enrolled, as indicated by student.

Student working to meet expenses
Employee who has decided to enroll in school

Principal job related to major **SERELMAJ**

Was the principal job related to the student's major field, as reported by the respondent.

Job related to major
Job not related to major

Race/ethnicity **RACE**

American Indian/Alaskan Native	A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.
Asian/Pacific Islander	A person having origins in any of the Asian or Pacific Islander original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or Pacific Islands. This includes people from China, Japan, Korea, the Philippine Islands, Samoa, India and Vietnam.
Black, non-Hispanic	A person having origins in any of the black racial groups of Africa, and not of Hispanic origin.
Hispanic	A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
White, non-Hispanic	A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (except those of Hispanic origin).
Other	A person not in one of the above categories.

State aid **STATEAMT**

Indicates the total amount of state aid received. State aid includes state grants, loans, state-sponsored work-study, and all other state financial aid. The percentage of students who received state aid is the percentage with positive amounts recorded for this variable.

Did receive state aid
Did not receive state aid

Tuition and fees for terms attended **TUITION**

Actual amount of tuition charged the student for the terms attended through 1995-96, as reported by the institution. Student report was used if institutional data were not available or if the student attended more than one institution during the academic year. The average amount is the average of all students, including those who did not have any tuition or fees.

Less than $1,500
$1,500-$2,999
$3,000-$4,499
$4,500-$8,999
$9,000-$13,499
$13,500 or more

Year began graduate education **GRADPYR**

The year the student began graduate education. Based on student reported year of entrance into graduate education.

1989 or earlier
1990-1993
1994 or later

Year of first bachelor's degree **SABA_YR**

Indicates year attained first bachelor's degree for those with bachelor's degree.

1989 or earlier
1990-1993
1994 or later

APPENDIX B: TECHNICAL NOTES

THE 1995-96 NATIONAL POSTSECONDARY STUDENT AID STUDY (NPSAS:96)

The 1995-96 National Postsecondary Student Aid Study (NPSAS:96) is a comprehensive nationwide study conducted by the Department of Education's National Center for Education Statistics (NCES) to determine how students and their families pay for postsecondary education. It also describes demographic and other characteristics of students enrolled. The study is based on a nationally representative sample of all students in postsecondary education institutions, including undergraduate, graduate, and first-professional students. Students attending all types and levels of institutions are represented in the sample, including public and private institutions and less-than-2-year institutions, 2-year institutions, and 4-year colleges and universities. The study is designed to address the policy questions resulting from the rapid growth of financial aid programs, and the succession of changes in financial aid program policies since 1986. The first NPSAS study was conducted in 1986-87, then again in 1989-90, and 1992-93.[15]

THE 1995 NATIONAL HOUSEHOLD EDUCATION SURVEY (NHES:95)

The 1995 National Household Education Survey (NHES:95) is also a nationwide study conducted by NCES. It provides descriptive data on the educational activities of the U.S. population and offers a variety of statistics on the U.S.'s condition of education. The NHES:95 goes beyond traditional, school-based data collection systems to a household-based data collection. A household survey has the potential to provide data to address many current issues in education, such as preprimary education, school safety and discipline, adult education, and activities related to citizenship.

The first full-scale NHES was implemented in the spring of 1991; the second and third were conducted in the spring of 1993 and the spring of 1995, respectively. Each of these collections included two topical components. The two survey components of the NHES:95,

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[15] For more information on the NPSAS survey, consult U.S. Department of Education. *National Postsecondary Student Aid Study, 1995-96 (NPSAS:96) Methodology Report*, NCES 98-073 by John A. Riccobono, Roy W. Whitmore, Timothy J. Gabel, Mark A. Traccarella, Daniel J. Pratt and Lutz K. Berkner. Project Officer: Andrew G. Malizio. (Washington, D.C.: National Center for Education Statistics, 1997)

Early Childhood Program Participation (ECPP) and Adult Education (AE), addressed the same topics as the NHES:91. The AE component of NHES:95 was utilized for this report. For the AE component, households were selected randomly and interviews were completed with 19,722 adults 16 years and older who were not currently enrolled in elementary or secondary school and not on active duty in the U.S. Armed Forces. Data collection was from January 1995 to April 1995.

DATA ANALYSIS SYSTEM

The estimates presented in this report were produced using the NPSAS:96 and NHES:95 Data Analysis Systems (DAS). The DAS software makes it possible for users to specify and generate their own tables from the NPSAS:96 and NHES:95 data. With the DAS, users can replicate or expand upon the tables presented in this report. In addition to the table estimates, the DAS calculates proper standard errors[16] and weighted sample sizes for these estimates. For example, table B.1 contains standard errors that correspond to table 3, and was generated by the DAS. If the number of valid cases is too small to produce a reliable estimate (less than 30 cases), the DAS prints the message "low-N" instead of the estimate.

In addition to tables, the DAS will also produce a correlation matrix of selected variables to be used for linear regression models. Included in the output with the correlation matrix are the design effects (DEFTs) for each variable in the matrix. Since statistical procedures generally compute regression coefficients based on simple random sample assumptions, the standard errors must be adjusted with the design effects to take into account the NPSAS:96 and NHES:95 stratified sampling method. (See discussion under "Statistical Procedures" below for the adjustment procedure.)

[16]The NPSAS:96 and NHES:95 samples are not simple random samples and, therefore, simple random sample techniques for estimating sampling error cannot be applied to these data. The DAS takes into account the complexity of the sampling procedures and calculates standard errors appropriate for such samples. The method for computing sampling errors used by the DAS involves approximating the estimator by the linear terms of a Taylor series expansion. The procedure is typically referred to as the Taylor series method.

Table B.1– Standard errors for table 3: Percentage distribution of adults enrolled in credential programs who received employer aid* according to type of employer aid received, by respondent demographics: 1995

	No employer aid	Employer paid*	Employer provided support
Total	1.0	0.8	1.0
Gender			
Male	1.5	1.3	1.5
Female	1.4	1.1	1.3
Race/ethnicity			
White, non-Hispanic	1.2	1.0	1.1
Black, non-Hispanic	2.9	2.4	2.6
Hispanic	3.3	2.3	3.1
American Indian/Alaskan Native	--	--	--
Asian/Pacific Islander	5.5	5.7	6.0
Other	6.6	4.5	6.7
Marital status			
Married	1.6	1.6	1.3
Separated	7.5	7.5	5.3
Divorced	3.5	3.2	2.9
Widowed	--	--	--
Never married	1.4	0.9	1.4
Age			
Less than 24	1.7	0.8	1.7
24-39	1.5	1.4	1.3
40-54	2.3	2.3	1.7
55-69	9.3	10.1	5.3
70 or more	--	--	--
Highest level of education completed			
Less than high school	6.2	5.0	4.5
High school diploma or equivalent	2.5	2.4	2.4
Some postsecondary education	1.5	1.1	1.5
Associate's degree	3.3	2.9	3.1
Bachelor's degree	2.5	2.2	2.3
Graduate degree	2.7	2.6	2.5
Number of household members under 18			
None	1.3	1.0	1.3
One	2.2	1.9	2.2
Two or more	2.1	2.1	1.8

Table B.1– Standard errors for table 3: Percentage distribution of adults enrolled in credential programs who received employer aid* according to type of employer aid received, by respondent demographics: 1995--Continued

	No employer aid	Employer paid*	Employer provided support
Own or rent home, or other arrangement			
Own home	1.5	1.6	1.3
Rent home	1.7	1.2	1.7
Other arrangement	2.1	1.5	2.0
Language spoken most at home			
English	1.0	0.9	1.0
Spanish	6.3	3.0	6.1
Other language	7.2	6.3	6.6

--Sample size is too small for a reliable estimate.

*Respondents who received cash assistance from their employer may or may not have received other forms of employer support.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES:95), 1995 Adult Education Data Analysis System.

For more information about the NPSAS:96 and NHES:95 Data Analysis Systems, consult the NCES DAS Website (WWW.PEDAR-DAS.org) or contact:

Aurora D'Amico
NCES Data Development and Longitudinal Studies Group
555 New Jersey Avenue, NW
Washington, DC 20208-5652
(202) 219-1365
Internet address: adamico@ed.gov

STATISTICAL PROCEDURES

The descriptive comparisons were tested in this report using Student's *t* statistic. Differences between estimates are tested against the probability of a Type I error, or significance level. The significance levels were determined by calculating the Student's *t* values for the differences between each pair of means or proportions and comparing these with published tables of significance levels for two-tailed hypothesis testing.

Student's *t* values may be computed to test the difference between estimates with the following formula:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}} \quad (1)$$

where E_1 and E_2 are the estimates to be compared and se_1 and se_2 are their corresponding standard errors. This formula is valid only for independent estimates. When estimates are not independent a covariance term must be added to the formula. If the comparison is between the mean of a subgroup and the mean of the total group, the following formula is used:

$$\frac{E_{sub} - E_{tot}}{\sqrt{se^2_{sub} + se^2_{tot} - 2p\, se^2_{sub}}} \quad (2)$$

where p is the proportion of the total group contained in the subgroup.[17]

When comparing two percentages from a distribution that adds to 100 percent, the following formula is used:

$$\frac{E_1 - E_2}{\sqrt{se^2_1 + se^2_2 - 2(r)se_1se_2}} \quad (3)$$

where r is the correlation between the two estimates.[18] The estimates, standard errors, and correlations can all be obtained from the DAS.

There are hazards in reporting statistical tests for each comparison. First, comparisons based on large t statistics may appear to merit special attention. This can be misleading, since the magnitude of the t statistic is related not only to the observed differences in means or percentages but also to the number of students in the specific categories used for comparison. Hence, a small difference compared across a large number of students would produce a large t statistic.

[17] U.S. Department of Education, *A Note from the Chief Statistician*, No. 2. (Washington, D.C.: National Center for Education Statistics, 1993)
[18] *Ibid.*

A second hazard in reporting statistical tests for each comparison occurs when making multiple comparisons among categories of an independent variable. For example, when making paired comparisons among different levels of income, the probability of a Type I error for these comparisons taken as a group is larger than the probability for a single comparison. When more than one difference between groups of related characteristics or "families" are tested for statistical significance, one must apply a standard that assures a level of significance for all of those comparisons taken together.

Comparisons were made in this report only when $p<=.05/k$ for a particular pairwise comparison, where that comparison was one of k tests within a family. This guarantees both that the individual comparison would have $p<=.05$ and that for k comparisons within a family of possible comparisons, the significance level for all the comparisons will sum to $p<=.05$.[19]

For example, in a comparison of the percentages of males and females who enrolled in postsecondary education only one comparison is possible (males versus females). In this family, $k=1$, and the comparison can be evaluated without adjusting the significance level. When students are divided into five racial-ethnic groups and all possible comparisons are made, then $k=10$ and the significance level of each test must be $p<=.05/10$ or $p<=.005$. The formula for calculating family size (k) is as follows:

$$k = [\, j * (j - 1) \,] / 2 \qquad (4)$$

where j is the number of categories for the variable being tested. In the case of race-ethnicity, there are five racial-ethnic groups (American Indian/Alaskan Native, Asian/Pacific Islander, black non-Hispanic, Hispanic, and white non-Hispanic), so substituting 5 for j in equation 4,

$$k = [\, (5)(5 - 1) \,] / 2 = 10 \qquad (5)$$

ADJUSTMENT OF MEANS TO CONTROL FOR BACKGROUND VARIATION

Tabular results are limited by sample size when attempting to control for additional factors that may account for the variation observed between two variables. For example, when examining the percentages of those who completed a degree, it is impossible to know to what

[19] The standard that $p<= 05/k$ for each comparison is more stringent than the criterion that the significance level of the comparisons should sum to $p<= 05$. For tables showing the t statistics required to ensure that $p<= 05/k$ for a particular family size and degrees of freedom, see Olive Jean Dunn, "Multiple Comparisons Among Means," Journal of the American Statistical Association, 56 (1961), pp. 52-64.

extent the observed variation is due to low-income status differences and to what extent it is due to differences in other factors related to income, such as type of institution attended, parents' education, and so on. However, if a nested table were produced showing income within type of institution and within parent's education, the cell sizes would be too small to identify the patterns. When the sample size becomes too small to support controls for another level of variation, one must use other methods to take such variation into account.

To overcome this difficulty, multiple linear regression was used to obtain means that were adjusted for covariation among a list of control variables.[20] The dependent variable, receiving employer aid, was regressed on a set of descriptive variables such as gender, race-ethnicity, etc. Substituting ones or zeros for the subgroup characteristic(s) of interest and the mean proportions for the other variables results in an estimate of the adjusted proportion for the specified subgroup, holding all other variables constant. For example, consider a hypothetical case in which two variables, age and gender, are used to describe an outcome, Y (such as completing a degree). The variables age and gender are recoded into a dummy variable representing age and a dummy variable representing gender:

Age	A
24 years or older	1
Under 24 years old	0
Gender	G
Female	1
Male	0

The following regression equation is then estimated from the correlation matrix output from the DAS:

$$Y = a + \beta_1 A + \beta_2 G \qquad (6)$$

[20]For more information about regression, see M. S. Lewis-Beck, Applied Regression, vol. 22 (Beverly Hills, CA: Sage Publications, Inc., 1980) and W. D. Berry and S. Feldman, Multiple Regression in Practice, vol. 50 (Beverly Hills, CA: Sage Publications, Inc. 1987).

To estimate the adjusted mean for any subgroup evaluated at the mean of all other variables, one substitutes the appropriate values for that subgroup's dummy variables (1 or 0) and the mean for the dummy variables representing all other subgroups. For example, suppose *Y* represents earning a degree, and is being described by age (A) and gender (G), coded as shown above, with means as follows:

Variable	Mean
A	0.355
G	0.521

Next, suppose the regression equation results in:

$$Y = 0.15 + (0.17)A + (0.01)G \quad (7)$$

To estimate the adjusted value for older students, one substitutes the appropriate parameter estimates and variable values into equation 7.

Variable	Parameter	Value
a	0.15	--
A	0.17	1.000
G	0.01	0.521

This results in:

$$Y = 0.15 + (0.17)(1) + (0.01)(0.521) = 0.325 \quad (8)$$

In this case, the adjusted mean for older students is 0.325 and represents the expected chance of the outcome for older students who look like the average student across the other variables (in this example, gender). In other words, the adjusted percentage of older students who attained a degree is 32.5 percent (0.325 x 100 for conversion to a percentage).

It is relatively straightforward to produce a multivariate model using the DAS, since one of the output options of the DAS is a correlation matrix, computed using pairwise missing values and weighted to account for complex sample design and nonresponse.[21] This matrix can be used by most statistical software packages as the input data to produce least-squares regression estimates of the parameters. That was the general approach used for this report, with an additional adjustment to incorporate the complex sample design into the statistical significance tests of the parameter estimates (described below). For tabular presentation, parameter estimates and standard errors were multiplied by 100 to match the scale used for reporting unadjusted and adjusted percentages.

Most statistical software packages assume simple random sampling when computing standard errors of parameter estimates. Because of the complex sampling design used for NHES and NPSAS, this assumption is incorrect. A better approximation of their standard errors is to multiply each standard error by the average design effect associated with the independent variable (DEFT),[22] where the DEFT is the ratio of the true standard error to the standard error computed under the assumption of simple random sampling. It is calculated by the DAS and produced with the correlation matrix.

[21] Although the DAS simplifies the process of making regression models, it also limits the range of models. Analysts who wish to use other than pairwise treatment of missing values or to estimate probit/logit models (which are the most appropriate for models with categorical dependent variables) can apply for a restricted data license from NCES. For more information on these alternative model specifications, see John H. Aldrich and Forrest D. Nelson, "Linear Probability, Logit and Probit Models," Quantitative Applications in the Social Sciences, vol 45. (Beverly Hills, CA: Sage University Press, 1984).

[22] The adjustment procedure and its limitations are described in C. J. Skinner and T. M. F. Smith (eds.). Analysis of Complex Surveys. (New York: John Wiley & Sons, 1989).

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